

■ DATA LEAKS AT A RECORD 506 ■ U.S. FORCES IN OKINAWA STAND DOWN, ORDER CURFEW ■ NIKKEI CLOSES ABOVE 70,000 ■ TEN-YEAR COUPON 3.1% ■ NOBEL FOR ICECUBE ■

Data Leaks Reach a Record 506 This Year as Intruders Turn AI on the Weak Points; a Restaurant Chain's App Gives Up 10.78 Million Customers' Details

A security company's count, carried on the Yomiuri's front page, finds attackers using artificial intelligence to search for holes in systems; Daiwa Securities reports 220,000 records leaked and a car-sharing service up to 6.6 million, among them 1.6 million images of driving licences

By Ethan Cole | Technology & Science Editor, with Daisuke Ito | Investigations & Longform



Marine Corps Air Station Futenma, in the city of Ginowan, Okinawa, seen from the air in May 2010. The American forces in Okinawa suspend operations from today until Friday and will impose a curfew from midnight to 5 a.m. for 30 days from Friday, after the arrest of a Marine from the base. (Photo: Sonata, Wikimedia Commons, CC BY-SA 3.0)

Leaks of personal information in Japan have reached 506 cases so far this year, a record, according to a count by a security company that the Yomiuri Shimbun carried on its front page on Wednesday.

Among the methods the count describes is one that was rare until recently: attackers using artificial intelligence to search systems for vulnerabilities, the flaws in software and settings through which an intruder gets in.

The figure arrived on a morning when the size of single cases was hard to ignore. Yakiniku King, the grilled-meat restaurant chain, has had about 10.78 million records taken through unauthorised access to its smartphone app, Nikkei reports.

Names, telephone numbers and e-mail addresses were among the information leaked. Dates of birth and passwords were not, and no payment details were exposed, because the app held none.

Daiwa Securities, one of the country's two largest brokers, has had about 220,000 records leaked, according to the morning edition of the Sankei Shimbun.

And at Times Car, the car-sharing service run by the parking company Park24, up to about 6.6 million records may have been exposed in a breach, among them some 1.6 million images of driving licences.

Three kinds of loss

The three cases illustrate different kinds of harm.

A restaurant chain's app holds little that is valuable by itself. But a name attached to a working telephone number and e-mail address is the raw material of the fraudulent text message and the fake delivery notice, and ten million of them is a large supply.

A broker's records matter for a different reason: the people in them have money invested. The reports available on Wednesday morning did not say what was taken from Daiwa, or how.

A driving licence is the most valuable of the three. It carries a photograph, an address and a date of birth, and it is the document most often shown to prove identity when an account is opened online. A clear image of one can be used to impersonate its owner.

What the machines change

Finding a weak point in software has always been laborious. An attacker had to read code, probe a system's responses and test guesses one at a time, and the defender's hope was that this took longer than fixing the flaw.

AI tools shorten that work. They read large amounts of code quickly, point to places where mistakes are likely and write the small programs needed to test whether a guess is right. Defenders use the same tools to find flaws first. The count lists their use by attackers among the methods behind this year's cases.

The supply of known flaws is growing to match. In June the Forum of Incident Response and Security Teams, the international association of security response teams, raised its forecast for the number of vulnerabilities to be catalogued this year to 66,000, the technology site ITmedia reported, in an article on AI's capacity to dig them up.

The law, and the state's new powers

Since April 2022 a company that suffers certain kinds of leak must report it to the Personal Information Protection Commission and notify the people affected. The obligation applies when more than 1,000 people are involved, when the data could be used to cause financial loss, when sensitive information is included, or when the leak was caused deliberately, as by an intruder.

The commission can give guidance and issue orders. It cannot impose administrative fines of the kind European regulators levy, although such penalties have been discussed in the law's periodic reviews.

The government's own powers changed last week. The laws on active cyber defence took effect on October 1, allowing the authorities, under conditions, to enter and disable servers used in attacks. The use of communications information that the laws also permit begins next autumn.

When the laws took effect, the prime minister said the threat could not be met by the government, the private sector or any one country alone, Sankei and ITmedia reported.

Co-operation across borders produced one visible result this month. A core member of the Qilin ransomware group, a Russian aged 28 who was detained in Osaka, was handed over to Germany on October 2.

What customers can do

For the people whose details are in the stolen files, the practical danger is a message that looks genuine. A fraudulent text or e-mail that uses the recipient's real name is more convincing than one that does not.

The usual advice after a leak is not to open links in unexpected messages, to change any password used

POLITICS

American Forces in Okinawa Halt Operations for Three Days and Order a Midnight Curfew for a Month

By Emi Kondo | Society & Local News

The American forces in Okinawa are suspending operations from today until Friday, and from Friday will impose a curfew between midnight and 5 a.m. for 30 days, Sankei News reports.

The measures follow the arrest on Sunday of a Marine from Futenma air station on suspicion of the robbery and murder of a woman in a hotel in Naha.

The suspect, Lance Corporal Devin Jacob Ballard, aged 20, denies the allegation. The woman, who was 39, was found in a room at the hotel, in the city's Wakasa district, early on Saturday. A post-mortem examination found that she had been strangled.

Investigators are reported to believe that she may have been attacked within an hour of the suspect entering the room.

The reports do not set out what the suspension of operations involves. In American military practice a pause of this kind, called a stand-down, takes units away from routine duties, usually so that they can be assembled for instruction.

The curfew begins an hour earlier than the rule the forces already apply. Under the liberty policy introduced in 2024, personnel in the lower ranks are restricted off base between one and five in the morning. The crime is alleged to have taken place between about two and four. The reports do not say whether the new curfew applies to all ranks.

A curfew is the measure the American forces have reached for before. After two sailors raped a woman in Okinawa in 2012, a general curfew was imposed on personnel throughout Japan. After a woman of 20 was killed in Uruma in 2016 by a former Marine working at Kadena Air Base, they declared a 30-day period of mourning, banning drinking off base and imposing a midnight curfew.

Okinawan leaders said on each occasion that restrictions lifted after a few weeks did not go far enough.

The governor, Genta Koja, protested in person on Monday to the senior American officer on the island, Lieutenant General Benjamin Watson. He asked for full co-operation with the investigation, measures against a recurrence and a review of the Status of Forces Agreement.

The general offered co-operation and did not apologise. According to the governor, the American side's position was that no apology could be made while the suspect denied the allegation.

Mr Koja is expected in Tokyo this week to put the same demands to the government.

Prime Minister Sanae Takaichi told the Diet on Monday that the government had protested strongly to the United States and demanded full co-operation with the investigation and tighter discipline.

The curfew will run until the first week of November. It will still be in force when Keen Sword, the joint Japanese-American exercise held every two years, begins on October 19.

Okinawa, with about 0.6 per cent of Japan's land, hosts about 70 per cent of the land used exclusively by the American forces in the country. The two governments agreed in 1996 to return Futenma once a replacement had been built at Henoko, in the north of the main island. Construction continues.

The photograph shows Futenma, the suspect's base, in the middle of the city of Ginowan.

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WEATHER — TOKYO

26°C

Low 20°C · Sunny with some cloud

Sapporo

21°

Osaka

25°

Fukuoka

25°

Naha

28°

Sunny across most of Japan. No. 27 becomes extratropical this evening, far to the north-east. No. 28 weakening. No. 29 forecast very strong by Saturday and about 550 km east of Chichijima on Monday. No landfall forecast. Full weather, Page 14.

TODAY IN BRIEF

- Leaks: a record 506 cases this year, with attackers using AI to find weak points. Yakiniku King's app loses 10.78 million records; Times Car up to 6.6 million, with 1.6 million licence images; Daiwa 220,000.
- Okinawa: the American forces suspend operations until Friday and impose a curfew from midnight to 5 a.m. for 30 days from Friday. Police believe the woman was attacked within an hour.
- Markets: the Nikkei closes at 70,683.98, its first close above 70,000 since July 1. The ten-year coupon reaches 3.1%, the highest since 1996. Ueda says underlying inflation is 'approaching 2%'.
- Defence: a proposal for nuclear-powered submarines emerges as the security documents are revised. The parties hold their first meeting on cutting lower-house seats.
- Science: the Nobel Prize in Physics goes to Francis Halzen for IceCube; a Chiba University team found its first record-breaking neutrinos. Chemistry is announced this evening.
- Books and AI: a Nippan company sold Japanese books to Anthropic without publishers' consent; the publishers' association asks for an explanation.

THREE TYPHOONS

- No. 27: extratropical this evening, far NE.
- No. 28 (Nolo): 970 hPa, weakening.
- No. 29 (Koguma): very strong by Saturday.
- Monday: 550 km east of Chichijima.

TODAY

- 6:45 p.m.: Nobel Prize in Chemistry.
- Emperor's Cup: Urawa v Omiya.
- Tokyo sunny with cloud, 26 degrees.

MARKETS

Nikkei 225	70,683.98 ▲737.12
TOPIX	4,183.56 ▲38.34
Yen	158.14 per \$
10-yr coupon	3.1%
Long-term rate	3.105%
BOJ policy rate	1.25%
Prime issues up	about 74%

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THE WEEK

- Fri. Oct. 9: curfew begins in Okinawa.
- Sat. Oct. 10: Climax Series begins.
- Mon. 12: Sports Day.

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for more than one service, and to check statements from banks and card companies. The national consumer hotline is 188.

Nothing in the reports suggests that the three cases are connected.

Also today

Tokyo shares rose for a second day and the Nikkei average closed at 70,683.98, its first close above 70,000 since July 1. The coupon on ten-year government bonds was set at 3.1 per cent, the highest since August 1996. The reports are on the economy pages.

The American forces in Okinawa suspend operations from today until Friday and will impose a curfew from midnight to 5 a.m. for 30 days from Friday, after the arrest of a Marine in the killing of a woman in Naha. The report is alongside.

The Nobel Prize in Physics has been awarded to Francis Halzen of the University of Wisconsin for the

TYPHOONS

Choi-wan Passed Far Out to Sea, but Atami Felt It: Ferries Cancelled and Visitors Kept Away

By Emi Kondo | Society & Local News

Typhoon No. 27 never came within several hundred kilometres of the Izu Peninsula. It still disrupted shipping and tourism in Atami, the Izu Shimbun reports.

Tokai Kisen, the shipping line that serves the Izu Islands, suspended services, and seven sailings between Ito and Izu Oshima were cancelled.

The trouble came mainly from the sea. A large typhoon drives a swell ahead of and around it that travels far beyond its storm zone, and the long waves it sent towards the coast made harbour entrances and open crossings unsafe.

For the islands the ferries are a lifeline. Izu Oshima, the largest and nearest of the chain, depends on them for visitors, supplies and the daily movement of its residents to the mainland.

For Atami, a resort whose trade depends on weekend and holiday visitors from Tokyo, a forecast of rough weather is itself enough to keep people away, whatever actually happens on the day.

The town's operators will be watching the coming weekend. Monday is the Sports Day holiday, and Typhoon No. 29 is forecast to be a very strong storm well to the south-east by then.

Forecasters warn that high waves and swell will continue on the Pacific coasts of the Ogasawara and Izu Islands and of Kanto.

Anyone planning a crossing to the islands over the holiday should check the shipping company's announcements on the day of travel, since services are decided at short notice.

Choi-wan itself is turning into an extratropical low far to the north-east and heading for the Aleutian Islands.

Its effect on the Izu coast was the effect of its size. Gales extended 560 kilometres to the west of its centre on Wednesday morning, and the swell went farther still.

TYPHOONS

Extratropical: What Happens When a Typhoon Stops Being a Typhoon, and Why It Is Not Always Good News

By Maya Suzuki | Science & Innovation Desk

By this evening Typhoon No. 27 will no longer be a typhoon. The meteorological agency forecasts that it will become an extratropical low.

The change is one of structure, not necessarily of strength.

A typhoon is a heat engine. It draws its energy from warm ocean water, which evaporates and releases heat as it condenses in the storm's towering clouds. Its core is warmer than the air around it, and its winds

detection of high-energy neutrinos from space with IceCube, the observatory buried in the Antarctic ice. Chiba University is a member of the project.

A company in the group of Nippan, the book wholesaler, sold Japanese books to the American AI developer Anthropic for about a year, without the publishers' permission, and says it did not know they were to be used to train AI. The publishers' association has asked for an explanation. Both reports are on the technology pages.

Typhoon No. 27 is turning into an extratropical low far to the east. No. 29, Koguma, is forecast to become a very strong typhoon by Saturday and to approach the Ogasawara Islands early on Monday, the Sports Day holiday. The map is inside.

Today's editorial takes its subject from the cartoon: the files that walked out of the gate.

are strongest near the centre.

An extratropical low draws its energy from something else: the contrast between cold air from the north and warm air from the south. It has fronts, like the lows on an ordinary weather map, and its strongest winds may lie far from the centre.

The transition happens when a typhoon moves north over cooler water and into the westerly winds of the middle latitudes. Choi-wan has done both.

The forecast numbers show what this means. The agency expects Choi-wan's pressure at 6 p.m. to be 972 hPa and by Thursday morning 968, lower than now, even as its maximum winds ease to 30 metres a second.

Extratropical storms can be very large, and some deepen dramatically over the North Pacific. Former typhoons have become some of the most intense storms ever recorded over the Bering Sea.

In 2014 the remains of Typhoon Nuri became one of the strongest storms on record in that region. In 2022 the remains of Typhoon Merbok brought severe coastal flooding to western Alaska.

For Japan, an extratropical low far to the east is of little concern. One that passes close can bring strong winds over a wider area than the typhoon did.

That is why the agency continues to issue information on former typhoons for as long as they matter.

TYPHOONS

Chichijima: The Island the Forecasts Measure From, a Day's Voyage From Tokyo

By Hana Ito | Research & Archive

The forecasts this week give the storms' distances from Chichijima, and for good reason. It is the main inhabited island of the Ogasawara group, about 1,000 kilometres south of central Tokyo, and the point of reference for everything that crosses that stretch of ocean.

Administratively it is part of Tokyo. Its village office governs a population of a little over 2,000 on Chichijima and a few hundred on neighbouring Hahajima.

There is no airport. The only regular link with the mainland is the ferry Ogasawara-maru, which sails from Takeshiba pier in Tokyo and takes about 24 hours. It makes the round trip about once a week.

That makes the islands among the most remote places in Japan to reach, though they lie within the capital's own administration.

The islands were settled in the nineteenth century by Westerners and Pacific islanders before Japan asserted its claim. Descendants of those first settlers still live there.

After the Second World War the islands were administered by the United States. They were returned to Japan in 1968.

In 2011 they were inscribed on UNESCO's World Heritage list for their unique wildlife, which evolved in isolation: snails, birds, plants and insects found

nowhere else.

Typhoons are a familiar part of island life. Houses are built for them, and supplies are laid in when a storm approaches, since the ferry does not sail in heavy seas.

A typhoon 550 kilometres to the east, as Koguma is forecast to be on Monday, would bring strong winds and high seas to the islands without a direct hit.

Residents will watch the forecasts more closely than anyone else this weekend.

TYPHOONS

No. 29 Is Forecast to Be Very Strong by Saturday and 550 Kilometres East of Chichijima on Monday Morning

By Kenta Sakamoto | Data & Visualization

Typhoon No. 29, Koguma, was a severe tropical storm in the area of the Marshall Islands at 6 a.m. on Wednesday, about 2,620 kilometres east-south-east of Chichijima. Of the three storms on the map it is the only one still gathering strength.

Its pressure was 992 hPa and its maximum winds 25 metres a second. It was moving west at 15 km/h, with gales reaching 330 kilometres to the north-west and 280 to the south-east.

The Japan Meteorological Agency's forecast is for steady intensification over warm water.

By Wednesday evening: 985 hPa, a severe tropical storm with winds of 30 metres a second. By Thursday morning: 975 hPa, a strong typhoon. By 3 a.m. on Friday: 965 hPa, winds of 40 metres a second.

By 3 a.m. on Saturday it is forecast to be a very strong typhoon, at 950 hPa with winds of 45 metres a second, and to stay at that strength through Sunday and into Monday.

At 3 a.m. on Monday its forecast position is about 550 kilometres east of Chichijima.

Weathernews has said that if the storm continues westward it will affect the Ogasawara Islands, and that some calculations bring it towards the Izu Islands. It stresses that the track is very uncertain.

For the Ogasawara Islands that means a weekend of rising seas. The islands have no airport, and their link with Tokyo is the ferry Ogasawara-maru, a voyage of about a day; its schedule is changed when typhoons threaten.

For the rest of the country the immediate concern is swell, which will reach the Pacific coast before any wind does.

Koguma means the Little Bear, the constellation, and is one of the names Japan contributed to the list used in the western Pacific.

TYPHOONS

The Holiday Weekend: Koguma Over the Ocean, Swell on the Coast, and Fine Weather Inland

By Kenta Sakamoto | Data & Visualization

Saturday, Sunday and Monday make a three-day weekend, ending with the Sports Day holiday. The forecasts for it depend on Typhoon No. 29.

The Japan Meteorological Agency expects Koguma to be a very strong typhoon from early Saturday and to lie about 550 kilometres east of Chichijima at 3 a.m. on Monday.

That track keeps it well away from the main islands through Monday. The Ogasawara Islands are the closest inhabited land, and they can expect rising wind and seas.

Beyond Monday the forecast is open. Weathernews says some calculations bring the storm towards the Izu Islands, and the direction it takes after the weekend will depend on the high pressure to its north.

Typhoon No. 28 is forecast to be an extratropical low east of Japan by early Sunday and should not affect the weekend.

On land the outlook is mostly fine. Wednesday's map shows sunshine over most of the country, and the pattern of fine days with cool mornings is expected to continue.

At sea the outlook is poor. Swell from the storms will continue on the Pacific coast, and ferry services to the islands may be affected at short notice.

Sport goes ahead regardless. The first stages of the baseball Climax Series begin on Saturday at the

domed stadiums of Seibu, in Tokorozawa, and the Giants, at Tokyo Dome.

Travellers to the Ogasawara and Izu Islands should follow the agency's typhoon information and the shipping lines' announcements.

The forecast for a storm five days away is revised several times a day. The latest will be on this page tomorrow.

TYPHOONS

The Three Storms at 6 a.m. Wednesday

By the Weather Desk

NO. 27 CHOI-WAN: large, strong. 37.9N 151.4E. North-east, 65 km/h.

970 hPa; winds 35 m/s, gusts 50. Extratropical by 6 p.m.; near the Aleutians Thursday.

NO. 28 NOLO: strong. 25.5N 165.2E, region of Wake Island. West, 45 km/h.

970 hPa; winds 40 m/s, gusts 55. Severe tropical storm near Minamitorishima early Friday.

Extratropical east of Japan early Sunday.

NO. 29 KOGUMA: severe tropical storm. 14.9N 163.9E, Marshall Islands. West, 15 km/h.

992 hPa; winds 25 m/s, gusts 35.

Strong by Thursday morning; very strong, 950 hPa and 45 m/s, by early Saturday.

About 550 km east of Chichijima at 3 a.m. Monday.

Source: Japan Meteorological Agency bulletins, 6:45 to 7:15 a.m.

TYPHOONS

At Sea and on the Coast This Week

By the Weather Desk

Ogasawara Islands: rising seas.

Izu Islands: swell; check ferries.

Kanto coast: high waves.

Stay off rocks and sea walls.

No. 27: leaving, extratropical.

No. 28: weakening.

No. 29: strengthening.

Very strong by Saturday.

Monday: 550 km east of Chichijima.

No landfall forecast.

TYPHOONS

Where Old Typhoons Go: The Aleutians, the Bering Sea and the Storms That Reach Alaska

By Hana Ito | Research & Archive

The forecast track of Typhoon No. 27 ends near the Aleutian Islands, the long chain that curves westward from Alaska towards Russia's Kamchatka Peninsula.

Many typhoons that recurve away from Japan end their lives in that part of the North Pacific.

The Aleutians run for nearly 2,000 kilometres and separate the Pacific from the Bering Sea. Their weather is among the stormiest on Earth, and the region is known to sailors and fishermen for persistent low pressure.

Former typhoons feed that pattern. As they lose their tropical character they can merge with existing lows and deepen into very large storms.

The North Pacific's fishing fleets, including Japanese vessels in earlier decades, have long worked those waters, and their crews have known the danger of a typhoon's afterlife.

In November 2014 the remnant of Typhoon Nuri deepened over the Bering Sea into one of the most intense storms recorded there.

In September 2022 the remnant of Typhoon Merbok drove the sea into villages along the west coast of Alaska, causing the worst coastal flooding there in half a century.

The storms matter far beyond the region. Their position and strength influence the flow of the jet stream, and through it the weather over North America in the following days.

Choi-wan is not forecast to be exceptional. By Thursday morning the agency expects it to be an extratropical low of 968 hPa with winds of 30 metres a second.

It will still be large, and somewhere in the North Pacific a ship will be keeping clear of it.

POLITICS



Prime Minister Sanae Takaichi at the rostrum of the House of Representatives, in a file image. The governing parties have resumed their talks on revising the constitution, and the parties have held their first meeting on reducing the number of lower-house seats. (Photo: WPM Productions)

POLITICS

Governing Parties Resume Talks on Revising the Constitution, With the Prime Minister's Eye on Next Year's Party Convention

By Aiko Tanaka | Senior Japan Correspondent

The governing parties have resumed their talks on revising the constitution, and the prime minister is aiming for progress she can present at her party's convention next year, the morning papers report.

The Liberal Democratic Party's convention is normally held in the spring. A date of that kind gives the talks a timetable they have usually lacked.

The parties favouring revision agree that something should change and disagree about what should change first.

The proposal with the widest support is a clause on emergencies, which would allow the terms of Diet members to be extended if a great earthquake or an armed attack made an election impossible. The present constitution has no such provision.

The proposal that matters most to the Liberal Democrats concerns the ninth article. They have long wished to add a reference to the Self-Defense Forces, so that the existence of the country's armed forces is beyond legal argument.

The Japan Innovation Party, the prime minister's

coalition partner, has its own draft amendments and has pressed for faster progress than the Liberal Democrats have managed in the past.

Revision requires the support of two-thirds of the members of each house, followed by a majority in a national referendum. The constitution has not been amended since it took effect in 1947.

A referendum can be held no sooner than 60 days and no later than 180 days after the Diet initiates an amendment.

In her policy speech on Monday Ms Takaichi said she strongly expected constructive and lively debate across party lines.

The opposition parties that resist any change will argue that a government with other priorities, beginning with prices, should not spend its first full session on the constitution.

The photograph shows the prime minister at the rostrum of the lower house.

POLITICS

A Proposal for Nuclear-Powered Submarines Emerges as the Government Rewrites Its Security Strategy

The idea would break with seven decades of practice; the defence minister has said he does not rule it out

By Aiko Tanaka | Senior Japan Correspondent

A proposal that Japan acquire nuclear-powered submarines has emerged ahead of the revision of the country's three main security documents by the end of the year, the Yomiuri Shimbun reports on its front page.

It would be a break with seventy years of practice. Every submarine the Maritime Self-Defense Force has operated has been driven by diesel engines and batteries; the newest carry lithium-ion batteries that let them stay submerged longer than their predecessors.

The idea is not new, but until now it has been discussed in euphemism.

The coalition agreement between the Liberal Democratic Party and the Japan Innovation Party, signed when Ms Takaichi formed her government last October, committed the two parties to promoting the possession of submarines that carry vertical launch tubes and use next-generation propulsion. The phrase was widely read as meaning nuclear power.

A panel of outside experts advising the Defence Ministry had recommended the month before that next-generation propulsion for submarines be studied.

The defence minister, Shinjiro Koizumi, has said he does not rule out the possession of nuclear-powered submarines and that the question will be discussed in the revision of the documents, Kyodo News has reported.

Three kinds of obstacle

The first is legal. The Atomic Energy Basic Act of 1955 confines the research, development and use of nuclear energy to peaceful purposes, and successive governments have held that the Self-Defense Forces could use nuclear propulsion only once it had become

common in ships generally. It has not.

The second is industrial. Japan builds reactors for power stations but has never built one small and robust enough for a submarine. Its only nuclear-powered ship, the research vessel Mutsu, leaked radiation on its first trial in 1974.

The third is political. Anything nuclear meets strong feeling in the only country to have suffered atomic bombing, and the cost of a nuclear fleet would compete with every other item in a defence budget that is already rising.

The case for it is endurance. A nuclear submarine can stay submerged for months and cross an ocean at speed without surfacing, which matters in waters as wide as the Pacific and against a Chinese navy that is growing quickly.

Two neighbours have chosen it. Australia is acquiring nuclear-powered submarines under its AUKUS arrangement with the United States and Britain, and South Korea received American approval last year to build its own.

The three documents, adopted in December 2022, are being revised ahead of their original schedule. The government has not said what the new versions will contain.

POLITICS

Why a Navy Wants a Reactor: What Nuclear Propulsion Gives a Submarine, and What Batteries Have Closed of the Gap

By Hana Ito | Research & Archive

A submarine's weakness is the air it needs. A diesel-electric boat runs on batteries while submerged and must come close to the surface to run its engines and recharge them, raising a breathing tube called a snorkel.

That is the moment it is most likely to be found. Radar can detect the snorkel, and the engines are noisy.

A nuclear reactor needs no air. A nuclear-powered submarine can stay submerged for as long as its crew and food allow, often two or three months, and can

run at high speed underwater for days, which a battery-powered boat cannot.

Japan has spent thirty years narrowing the gap by other means.

The Soryu class, which entered service from 2009, added an air-independent engine that let the boats stay down for longer at low speed. The last two of the class, commissioned from 2020, replaced that system and the old lead-acid batteries with lithium-ion batteries, the first submarines in the world to rely on them.

The Taigei class that followed, from 2022, is built around lithium-ion batteries from the start. Japanese submarines are regarded by other navies as among the quietest conventional boats in service.

Quietness is where conventional boats still have an advantage. A reactor's cooling pumps make noise that a submarine sitting silently on batteries does not.

The argument for going further rests on distance. Japanese submarines patrol from bases in Kure and Yokosuka; the waters of interest stretch past Taiwan and into the western Pacific. A slow boat spends much of its endurance getting to its station.

The other argument concerns weapons. The coalition's language joins next-generation propulsion with vertical launch tubes, which a larger boat could carry in numbers for long-range missiles.

A nuclear submarine is also far more expensive to build and to man, and needs a shore establishment of a kind Japan does not have, for refuelling, maintenance and the eventual disposal of the reactor.

Each of the six navies that operate nuclear submarines today spent many years building its first.

POLITICS

The Mutsu: Japan's Only Nuclear-Powered Ship, and the Leak That Kept It at Sea

By Hana Ito | Research & Archive

Japan has built one nuclear-powered ship. Her story is the reason the subject is approached with care.

The Mutsu was a research vessel, launched in 1969 and named after the bay in Aomori Prefecture where she was to be based. Her purpose was to give the country experience of nuclear propulsion for merchant shipping.

Her reactor first reached criticality in 1974, during trials in the Pacific off Aomori. Days later, in September of that year, radiation leaked from the shielding around it.

The leak was small, but the reaction on shore was not. Local fishermen, fearing for their catch, blocked the ship's return to her home port, and she remained at sea for weeks before an agreement allowed her back.

Years of repairs followed, and a long search for a port that would accept her.

She finally made a series of experimental voyages in 1990 and 1991, and the programme was then wound up. The reactor was removed and is displayed at a science museum in Mutsu city.

The hull was not wasted. Rebuilt with conventional engines, it became the Mirai, one of the oceanographic research ships of the Japan Agency for Marine-Earth Science and Technology.

Two lessons were drawn. One concerned engineering: that a reactor at sea is a different problem from one on land. The other concerned trust, and the readiness of coastal communities to accept a reactor in their harbour.

Commercial shipping never adopted nuclear power in any number, which is why the government's view that the Self-Defense Forces may use it only once it is common has never been tested.

Anyone proposing a nuclear submarine fleet will have to answer the question the fishermen of Mutsu Bay asked in 1974: where will it berth?

POLITICS

Canberra and Seoul Chose Nuclear Boats. Here Is How, and What It Is Costing Them

By Jonathan Mercer | Senior Editor, International Desk

Japan would not be the first American ally in the Pacific to decide that it needs nuclear-powered submarines. It would be the third.

Australia announced its decision in September 2021

under AUKUS, a partnership with the United States and Britain. It cancelled a contract for French conventional submarines to do so.

The plan is to buy several American Virginia-class submarines from the early 2030s and then to build a new class, designed with Britain, in Australia. Its government has put the cost at up to 368 billion Australian dollars over three decades.

Australia has no nuclear power industry, which is one reason the plan relies so heavily on its partners for reactors, training and maintenance.

South Korea's route was quicker and more political. It had long wanted nuclear-powered boats to track North Korean submarines. President Trump said last October that he had approved its building one, and the two governments confirmed the arrangement in a fact sheet the following month.

Both cases turned on American consent. American and British naval reactors run on highly enriched uranium, and the United States had shared its naval propulsion technology with only one country before Australia: Britain, in 1958.

Japan's position differs in two ways. It has the most capable shipbuilding and reactor industries of the three, and the strongest domestic restraint on military uses of nuclear energy.

There is also the question of fuel. A Japanese reactor could in principle use low-enriched uranium, as France's submarines do, which would avoid some proliferation concerns but require a different design.

China operates a growing fleet of nuclear submarines and Russia keeps much of its Pacific fleet's underwater strength in them.

Whatever Tokyo decides, it will not be able to buy the result off a shelf. If the Australian programme is any guide, a decision taken this year would not produce a Japanese-built boat for well over a decade.

POLITICS

Investigators Believe the Woman Was Attacked Within an Hour of the Suspect Entering the Room

The Marine remains in police custody and denies the allegation; a security camera recorded a man leaving with her belongings

By Emi Kondo | Society & Local News

Investigators in Naha believe that the woman found dead in a hotel room on Saturday may have been attacked within an hour of the Marine accused of killing her entering the room, according to reports on Wednesday.

The timing is one of the details the police are using to build the case against Lance Corporal Devin Jacob Ballard, aged 20, who is assigned to Futenma air station and was arrested early on Sunday on suspicion of robbery and murder.

He denies the allegation.

The outline of what the police say happened has been reported over several days.

An employee of the hotel, in Wakasa, near the port of Naha, telephoned for an ambulance early on Saturday and said a woman was unconscious. She was 39. A post-mortem examination found that she had been strangled.

Investigators concluded from the state of the room that it was a case of robbery and murder and began looking for a man who had entered the hotel with her.

A security camera recorded a man leaving by the hotel's entrance carrying her belongings, the Okinawa Times reported. Her wallet and rucksack were later found near the hotel.

The crime is alleged to have taken place between about two and four in the morning.

Okinawa prefectural police have 197 officers on the case, at a special investigation headquarters at Naha police station.

Because Japanese police made the arrest, the suspect is in Japanese custody, and the provisions of the Status of Forces Agreement under which American authorities may hold a suspect until he is charged do not apply.

Under Japanese law the police had 48 hours to send the case to prosecutors, who then had a day to ask a judge to order his detention. Detention can last ten days and be extended by ten more before prosecutors must decide whether to indict.

The American forces said this week that they had co-operated with the investigation from the start and would continue to do so.

POLITICS

POLITICS

1995, 2012, 2016: What the American Forces Did After Earlier Crimes in Okinawa, and What Changed

By Hana Ito | Research & Archive

The measures announced this week follow a pattern set over thirty years.

In September 1995 three American servicemen abducted and raped a 12-year-old schoolgirl in northern Okinawa. The American authorities declined at first to hand the suspects to the Japanese police before they were charged, as the Status of Forces Agreement allowed.

The anger that followed was the greatest the island had seen since its return to Japan. Organisers put the crowd at a rally in Ginowan that October at 85,000.

Two things changed. The two governments agreed that the United States would give sympathetic consideration to handing over suspects before indictment in cases of murder or rape. And in 1996 they agreed to return the land occupied by Futenma air station, once a replacement had been built. It is still being built.

In October 2012, after two sailors raped a woman in Okinawa, the commander of the American forces in Japan imposed a curfew on all personnel throughout the country between eleven at night and five in the morning. It was relaxed in stages over the following years.

In 2016 a woman of 20 was murdered in Uruma by a former Marine then working as a civilian at Kadena Air Base. The forces declared a 30-day period of mourning, with a midnight curfew and a ban on drinking off base.

In 2024, after a series of sexual assaults by American personnel came to light, the liberty policy was tightened again to restrict the lower ranks off base in the small hours.

Each set of measures has been described by the American side as a sign of seriousness, and by Okinawan politicians as a gesture that expires.

What has not changed in that time is the agreement itself. The Status of Forces Agreement of 1960 has never been amended. Changes have been made instead through supplementary agreements and through changes in how it is applied.

That is why the governor's demand for a review, made again this week, is the one the two governments find hardest to answer.

POLITICS

The Agreement Nobody Has Amended: What the Status of Forces Agreement Says About a Suspect

By Rachel Kim | Washington-Tokyo Liaison

Governor Koja asked this week, as his predecessors did, for a review of the Status of Forces Agreement. The document is the legal basis for the presence of about 50,000 American personnel in Japan, and its most contested passages concern crime.

Article 17 divides jurisdiction. Offences committed on duty fall to the American military. Offences committed off duty, such as the one alleged in Naha, fall primarily to Japan.

The difficulty is custody. Where the American side holds a suspect, the agreement allows it to keep him until he is indicted, and Japanese investigators must question him on its terms.

Since 1995 the United States has undertaken to consider favourably Japanese requests for earlier transfer in serious cases. Critics say that an undertaking is not a right.

In the present case the issue does not arise, because the Japanese police arrested the suspect themselves.

Other passages matter to Okinawans for other reasons. The agreement governs access to the bases by Japanese officials after accidents, the investigation of environmental contamination, and the rules on aircraft.

The two governments have preferred to supplement the agreement rather than reopen it. In 2015 they signed an accord on environmental inspections; in 2017 they narrowed the definition of the civilian component, the civilians covered by the agreement, after the killing in Uruma.

Washington's reluctance to renegotiate is easy to explain. It has similar agreements with dozens of countries, and a concession in one would be asked for by others.

Tokyo's reluctance is more delicate. The agreement is part of an alliance it regards as indispensable, and reopening it would mean bargaining with the ally on whose protection it relies.

Governor Koja's predecessors made the same request in different language. None succeeded. Whether he does may depend less on Washington than on how hard Tokyo is prepared to push.

POLITICS

Parties Hold Their First Meeting on Cutting Lower-House Seats; Proposals Due by the End of the Month, but the Size of the Cut Divides Them

By Michael Hayes | Deputy Editor, Politics & Policy

The governing and opposition parties held their first meeting on reducing the number of seats in the House of Representatives, and aim to produce proposals for reform by the end of October, the morning papers report.

They are some distance apart. The governing coalition wants a reduction to be agreed in the present session of the Diet. Several opposition parties want no reduction at all, and those prepared to consider one disagree about where it should fall.

The reduction is the price of the coalition. The Japan Innovation Party made a cut of about a tenth in the size of the lower house a condition of the agreement under which Ms Takaichi formed her government, and has campaigned for a smaller legislature since its beginnings in Osaka.

The house has 465 members: 289 elected in single-seat constituencies and 176 by proportional representation.

Cutting the proportional seats is simpler, because it needs no new boundaries. It also hurts the smaller parties, which win most of their seats there, and they object for that reason.

Cutting constituencies means redrawing boundaries and taking seats from somewhere, and every seat abolished belongs to someone.

The Democratic Party for the People has said it could accept a reduction on conditions concerning how it is done.

In her policy speech on Monday the prime minister said she expected thorough discussion with a view to achieving a reduction in this Diet.

By convention, changes to the electoral system have been made with the agreement of the main opposition parties. A reduction forced through by the governing parties alone would break that custom, and the opposition would say so at every election that followed.

The council's deadline gives the parties three weeks. The session is expected to last about two months.

POLITICS

The Adams Method: How Japan Shares Out Its Constituencies, and Why Ten Prefectures Lost a Seat Four Years Ago

By Kenta Sakamoto | Data & Visualization

Any cut in the number of constituencies has to be fitted to a formula the Diet adopted ten years ago.

The formula is called the Adams method, after John Quincy Adams, the former American president who proposed it in 1832. It distributes seats among prefectures in proportion to population while guaranteeing every prefecture at least one.

It was adopted in 2016 because the courts had lost patience. The Supreme Court ruled three times, after the elections of 2009, 2012 and 2014, that the gap in the value of a vote between the most and least populous constituencies amounted to a state of unconstitutionality.

The old system had begun by giving every prefecture one seat and sharing out the rest, which protected rural areas at the expense of cities.

The new method was applied for the first time after the census of 2020. The redistribution, which took effect in 2022, was known as ten up, ten down.

Tokyo gained five constituencies, Kanagawa two, and Saitama, Chiba and Aichi one each. Ten

prefectures lost one: Miyagi, Fukushima, Niigata, Shiga, Wakayama, Okayama, Hiroshima, Yamaguchi, Ehime and Nagasaki.

The next share-out by the formula will follow the census of 2030. Last year's census is used to check that no constituency has grown to twice the population of another, and the population has continued to move towards Tokyo.

A reduction in the total would compound the effect. Fewer seats shared by the same formula means more prefectures falling to the minimum and the largest cities losing least.

That is one reason rural members of every party are wary. Their constituencies are the ones that disappear when the numbers are run.

The proportional seats are shared among eleven regional blocks by a separate calculation and could be cut without touching the map.

POLITICS

Yana Asked the Land Ministry About Road Budgets in February; the Ministry Says It Made No Difference

By Michael Hayes | Deputy Editor, Politics & Policy

The agriculture minister, Kazuo Yana, made an inquiry to the Ministry of Land, Infrastructure, Transport and Tourism about road budgets in February, the morning papers report. The ministry denies that the inquiry affected any allocation.

The disclosure complicates the defence the minister offered on Monday.

Mr Yana withdrew and apologised that day for remarks made at a party gathering in May, in which a speaker on a recording, whom he acknowledged was himself, said that road budgets had been cut drastically for two towns whose mayors had not supported him.

He denied the substance. He said he had never approached the land ministry about either town's allocation and that what he told the gathering did not describe anything he had done.

The reports do not say whether the February inquiry concerned the two towns named on the recording. That is the question on which the matter now turns.

A member of the Diet asking a ministry about budgets in his area is not in itself improper. It is routine, and ministries keep records of such contacts.

What would be improper is the use of that access to reward or punish municipalities for the politics of their mayors, which is what the recording describes.

The ministry's denial covers the outcome. It says the inquiry had no effect.

The opposition parties have made Mr Yana their first target of the session and are expected to pursue him in the budget committee, where ministers answer questions one at a time.

He has said he will not resign. The prime minister, who appointed him, has not been asked to dismiss him in a forum where she must answer at length. She soon will be.

POLITICS

The Party's Tax Commission Meets With New Members; How to Pay for the Cut on Food Is the First Question

By Yuki Saito | Economics & Finance Correspondent

The Liberal Democratic Party's Research Commission on the Tax System met with its new members and exchanged views, the morning papers report. The source of the money for the prime minister's cut in the consumption tax on food was the main issue.

Income-tax deductions were also discussed.

The meeting begins the commission's autumn. Its work ends in December with the annual outline of tax reform, which the government then turns into legislation for the ordinary session that opens in January.

The commission has a problem the prime minister has handed it. Ms Takaichi told the Diet on Monday that the cut, and the payment to households that accompanies it, would be paid for without deficit-financing bonds, and that there was no need to worry. She did not say how.

The consumption tax on food and drink is eight per

cent. Taking it off altogether would cost about five trillion yen a year by the finance ministry's earlier estimates. A partial cut would cost less.

The options for paying are few and each has opponents. Spending can be cut, other taxes raised, or allowances and special measures in the tax code withdrawn.

The consumption tax is also earmarked by law for social security, so a reduction leaves a gap in the funding of pensions, medical care and nursing care that must be filled from somewhere.

Income-tax deductions are the other subject on which the party has been pressed. The question of the income at which tax begins to be paid became last year's most contentious tax argument, driven by the Democratic Party for the People.

The chairman of Keidanren, Yoshinobu Tsutsui, said on Monday that the funding for the food tax cut should be shown as soon as possible.

The commission's answer will not come in a day. But the order of its business shows that the prime minister's party regards the funding as unsettled.

POLITICS

The Tax Commission: Where Japanese Tax Policy Is Decided, Before the Government Proposes It

By Hana Ito | Research & Archive

In most parliamentary democracies tax policy is announced by a finance minister. In Japan it is settled each December in a room at the headquarters of the governing party.

The Liberal Democratic Party's Research Commission on the Tax System is formally an internal body. In practice its annual outline of reform is the government's tax policy, and the finance ministry drafts legislation from it.

Its membership is large, since any party member may attend. Power lies with a small group of senior members versed in tax, known informally as the inner circle, who settle the difficult points in private.

The commission's autumn follows a fixed course. Ministries and industry associations submit requests; the commission hears them; members argue over which to accept; and the outline is adopted in mid-December, usually alongside the coalition partner's own commission.

The government also has a Tax Commission of its own, made up of academics and experts, which takes a longer view. Its reports are respected and less often followed.

The party commission has at times been a match for prime ministers. Its chairmen have resisted tax cuts they regarded as unaffordable and tax increases they regarded as unwinable.

In recent years coalition arithmetic has reduced that independence. When the governing parties have needed the votes of others, tax policy has been bargained for across parties, as it was over the income threshold last year.

This year the commission must reconcile two things: the prime minister's promise of a cut in the tax on food, and her undertaking that it will not be paid for by borrowing.

The outline due in December will show which prevails.

Its decisions take effect, in most cases, from the following April, the start of the fiscal year.

POLITICS

Government Considers a Small Second Supplementary Budget for Public Works and Disaster Response

By Yuki Saito | Economics & Finance Correspondent

The government is considering a second supplementary budget for the current fiscal year, on a small scale and concentrated on public works and the response to disasters, the morning papers report.

The size and the date of submission have not been reported.

A small budget would be a departure. Supplementary budgets in recent years have often been large, built around economic packages announced in the autumn and running to more than ten trillion yen.

The restraint fits the prime minister's message to the bond market. On Monday she promised that her tax cut would be funded without deficit-financing bonds;

POLITICS

a large supplementary budget paid for by borrowing would sit awkwardly beside that promise.

Public works and disaster response are also the items most easily defended in a year of typhoons and heavy rain. Three storms have stood over the Pacific this week, and the ground in parts of Chiba and Kanagawa is still loose after Typhoon No. 25.

Spending on public works can be financed by construction bonds, which the public finance law permits. Borrowing to meet current spending requires a special law, and it is that borrowing the prime minister has said she will not use for the tax cut.

The bond market is already charging more. The coupon on ten-year government bonds sold on Tuesday was set at 3.1 per cent, the highest since August 1996.

A second supplementary budget would need the approval of both houses.

The government has not confirmed the reports.

The finance ministry's view of the year's revenue, which has been lifted by inflation and corporate profits, will set the room available.

POLITICS

The Second Budget of the Year: How Supplementary Budgets Became a Japanese Habit

By Hana Ito | Research & Archive

Japan's fiscal year runs from April to March. The main budget is passed by the Diet before it begins, usually in March. In most years at least one more follows.

The public finance law allows a supplementary budget when spending becomes necessary after the main budget was drawn up. Natural disasters are the classic case.

Over time it has become something else: the vehicle for the economic stimulus packages that governments announce in the autumn.

The pattern has advantages for a government. A supplementary budget passes quickly, is examined less closely than the main budget and can be presented as a response to events.

Its critics, who include the finance ministry's own advisers, say it has become a way of spending without the discipline of the main budget. Funds appropriated in a hurry are often not spent within the year and are carried over.

The amounts became very large during the pandemic, when supplementary budgets ran to tens of trillions of yen.

Since then governments have promised a return to restraint and have mostly kept spending above what restraint would suggest.

A small budget concentrated on disaster work would sit at the modest end of the range.

It would still be paid for largely by borrowing. Construction bonds, which finance public works, are permitted by the public finance law. Deficit-financing bonds, for other spending, require a special law that the Diet has renewed for several years at a time.

Higher interest rates have changed the arithmetic. Every trillion yen borrowed this year costs more to service than it would have a few years ago.

POLITICS

Hyogo Prefecture Bars Freelance Journalists From the Governor's Press Conferences

By Naomi Kato | Culture & Society Editor

Hyogo Prefecture has decided not to allow freelance journalists to attend the governor's press conferences, the morning papers report. The decision was taken by the governor, Motohiko Saito.

Reporters from the newspapers and broadcasters that belong to the prefectural press club are not affected.

The reports available do not give the reasons for the decision or say when it takes effect.

Mr Saito is no stranger to contention. In 2024 the prefectural assembly passed a motion of no confidence in him over his handling of allegations made by a senior official, and he lost his post.

He stood again in the election that followed in November of that year and won. A committee of lawyers appointed by the prefecture later found that his handling of the official's allegations had broken the law protecting whistleblowers.

His press conferences since then have been closely followed, by established news organisations and independent reporters alike.

In Japan the press conferences of governors, ministers and other officials are usually organised by press clubs, associations of reporters from established news organisations attached to each institution.

Some officials have opened their conferences to all comers. The governor of Nagano declared an end to the press-club system in his prefecture in 2001, and several ministries opened their conferences to freelance and foreign reporters after the change of government in 2009.

Freelance journalists have argued for years that exclusion from official press conferences narrows the questions officials are asked.

A governor may decide who attends his own conferences. Whether he should is the question the decision raises.

POLITICS

Politics Digest

By the Politics Desk

OKINAWA: Governor Genta Koja is expected in Tokyo this week to press for full co-operation with the investigation in Naha, measures against a recurrence and a review of the Status of Forces Agreement.

CURFEW: The American forces' curfew from midnight to 5 a.m. begins on Friday and runs for 30 days, into the first week of November.

DIET: Party leaders are to put their questions on the prime minister's policy speech in plenary sittings of both houses, before the budget committees begin.

SEATS: The inter-party council on reducing the size of the lower house aims to produce proposals by the end of October.

CONSTITUTION: The governing parties have resumed their talks on revision.

TAX: The Liberal Democrats' tax commission has begun its autumn work with the funding of the cut in the tax on food.

BUDGET: A small second supplementary budget, for public works and disaster response, is under consideration.

DEFENCE: A proposal to acquire nuclear-powered submarines has emerged in the revision of the security documents, the Yomiuri reports.

HYOGO: Freelance journalists are barred from the governor's press conferences.

ELECTIONS: Yokohama elects a mayor on October 18.

POLITICS

The Week Ahead

By the Politics Desk

WEDNESDAY, OCT. 7: American forces in Okinawa suspend operations until Friday. Nobel Prize in Chemistry, about 6:45 p.m. Japan time. Nagasaki Kunchi festival opens. Emperor's Cup ties.

THURSDAY, OCT. 8: Nobel Prize in Literature, about 8 p.m. Markets in mainland China reopen after the National Day holiday.

FRIDAY, OCT. 9: Nobel Peace Prize, announced in Oslo, about 6 p.m. The midnight curfew begins in Okinawa. Takayama autumn festival, to Saturday.

SATURDAY, OCT. 10: Climax Series first stages: Seibu v Nippon-Ham, Giants v DeNA. Anniversary of North Korea's ruling party. Typhoon No. 29 forecast to be very strong.

SUNDAY, OCT. 11: World judo championships end with the mixed team event.

MONDAY, OCT. 12: Sports Day holiday. Nobel prize in economic sciences. Typhoon No. 29 forecast to approach the Ogasawara Islands.

WEDNESDAY, OCT. 14: Climax Series final stage in the Central League begins at Koshien.

OCT. 18: Yokohama mayoral election. Asian Para Games open in Aichi and Nagoya.

OCT. 19 TO 29: Exercise Keen Sword.

OCT. 29 AND 30: Bank of Japan policy meeting. NOV. 3: American midterm elections.

ELSEWHERE IN TODAY'S PAPER

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Nippan's book sales to Anthropic, Page 11.

Hanshin win; the play-off dates, Page 15.

INTERNATIONAL

Meloni Applies to Register Her Voice as a Trademark to Guard Against AI Imitation

By Jonathan Mercer | Senior Editor, International Desk

The Italian prime minister, Giorgia Meloni, has applied to register her voice as a trademark, as a measure against its misuse by artificial intelligence, the morning papers report.

The reports available did not give details of the application, such as the office where it was filed or what recordings it covers.

The idea is to give the owner of a voice a legal claim against those who copy it. A registered mark can be enforced against unauthorised commercial use, without the need to prove that a particular recording is a forgery intended to deceive.

Sound marks are an established category. In the European Union they have been easier to register since 2017, when the requirement that a mark be represented graphically was dropped.

A human voice is a less familiar subject. Whether an office will accept it, and how such a mark would be infringed by a synthetic imitation, are untested questions.

Ms Meloni has personal reasons for the interest. In 2024 she sought 100,000 euros in damages from two men accused of making pornographic videos in which her face had been placed on another woman's body, and said she would give any award to a fund for women who suffer violence.

Italy last year became one of the first European countries to pass a national law on artificial intelligence. It made the unlawful spreading of AI-generated or manipulated images, video or voices that cause harm a crime punishable by one to five years in prison.

The European Union's own act on artificial intelligence requires that deepfakes be labelled as artificially generated.

Denmark has proposed going further, by giving every person a form of copyright over their own face, body and voice.

Japan has no specific law on the subject. Its courts recognise a right of publicity that protects the commercial value of a famous person's name and likeness, and the imitation of voices by AI, a cause taken up by Japanese voice actors, has been raised in the government's discussions of intellectual property.

INTERNATIONAL

Yemen's Government Says It Has Retaken Key Houthi Strongholds With Saudi Support

By Jonathan Mercer | Senior Editor, International Desk

Yemen's internationally recognised government has announced that its forces have recaptured key strongholds held by the Houthi movement, with the support of Saudi Arabia, the morning papers report.

Japanese reports refer to the government as the interim administration. It is led by the Presidential Leadership Council, formed in 2022.

The reports available did not name the places concerned or give the scale of the fighting, and the Houthis' response was not reported.

If the claims are borne out, they would mark a shift in a war whose front lines had changed little for years.

The Houthis, a movement from the mountainous north, seized the capital, Sanaa, in September 2014. A coalition led by Saudi Arabia intervened the following March on the side of the government, and the war that followed caused one of the worst humanitarian crises in the world.

A truce brokered by the United Nations in April 2022 largely halted major offensives on land, although it formally lapsed after six months.

The Houthis turned their attention outward after the war in Gaza began. From November 2023 they attacked merchant ships in the Red Sea and the Gulf of Aden, saying they were acting in solidarity with the Palestinians, and fired missiles and drones at Israel.

The United States and Britain struck Houthi targets repeatedly. In May last year Washington and the Houthis agreed, through Oman, to stop attacking each other; the attacks on Israel and on ships connected to it continued for a time.

Israel struck back at Houthi-held ports and at Sanaa, and in August last year killed the Houthis' prime minister and several of his ministers.

The movement is backed by Iran, which the Saudis have long regarded as their main rival in the region.

Any change in the war matters to Japan through the sea lanes. Ships bound for Europe from Asia pass the Yemeni coast at the Bab el-Mandeb strait.

INTERNATIONAL

October 7, 2023: What Happened on the Day the War Began

By Hana Ito | Research & Archive

The attack began at about half past six in the morning, on a Saturday that was also a Jewish holiday, with a barrage of thousands of rockets fired from Gaza.

Under its cover, fighters breached the fence that Israel had built around the territory at dozens of points, using explosives, bulldozers and motorcycles, and some crossed by paraglider.

They overran army posts along the border and entered towns and kibbutzim nearby, among them Be'eri and Kfar Aza, killing families in their homes.

At a music festival in the desert near Re'im, more than 360 people were killed.

About 1,200 people died that day, by Israel's count, most of them civilians. It was the deadliest day for Jews since the Holocaust.

Two hundred and fifty-one people were taken into Gaza as hostages, among them children and elderly people, and citizens of other countries, including Thailand.

It took Israel's army most of three days to regain control of the border area.

The scale of the failure shook the country. The army and the security services had misread warnings that an attack was being prepared.

Israel declared war, and its ground forces entered Gaza later that month.

Thousands of foreign nationals left the region in the weeks that followed. Japan's Air Self-Defense Force flew Japanese citizens and others out of Tel Aviv, and a small number of Japanese in Gaza left through the Rafah crossing into Egypt.

INTERNATIONAL

Twenty Points, a Yellow Line and a Board of Peace: How the Ceasefire Was Built

By Rachel Kim | Washington-Tokyo Liaison

The ceasefire that took effect in Gaza last October was built on a twenty-point plan that President Trump published at the end of September.

Its first stage was the exchange: the release of all the hostages held in Gaza, living and dead, in return for Palestinian prisoners held by Israel, and a pause in the fighting.

Israeli forces pulled back to a boundary inside Gaza that came to be known as the yellow line, leaving them in control of a little over half the territory.

Leaders gathered at Sharm el-Sheikh in Egypt on October 13 to mark the agreement, on the day the living hostages came home.

The later stages were always the harder part. They required Hamas to give up its weapons and its role in governing Gaza, Israel to withdraw further, and outside powers to provide security and money.

In November the United Nations Security Council endorsed the plan's two main institutions: a Board of Peace, chaired by Mr Trump, to oversee Gaza's administration and reconstruction, and an international stabilisation force. Russia and China abstained.

The board was formally launched in January, and a committee of Palestinian technocrats was named to run day-to-day services.

Neither Hamas's disarmament nor the composition of the stabilisation force proved simple. Israeli strikes and Palestinian deaths continued to be reported after the ceasefire, and each side accused the other of breaking it.

The plan held out the possibility of a path to Palestinian statehood, in conditional language that Israel's government rejected.

The plan has framed every discussion of Gaza's future since it was published.

INTERNATIONAL



Military aircraft over the White House during a state visit in September, in a file image. The United States and China are discussing mutual visits to nuclear facilities, CNN reports. (White House Official)

INTERNATIONAL

America and China Are Discussing Visits to Each Other's Nuclear Facilities, CNN Reports

Such an exchange would be a first step towards the transparency Washington has demanded as Beijing's arsenal grows

By Rachel Kim | Washington-Tokyo Liaison

The United States and China are discussing mutual visits to each other's nuclear facilities, CNN reports.

The reports available in Tokyo did not say which facilities might be visited, by whom or when, or whether the visits would involve weapons sites or only civilian ones.

Even a modest exchange would be unusual. China has declined for years to enter talks on limiting nuclear arms, arguing that its arsenal is a fraction of those of the United States and Russia and that the two larger powers should reduce theirs first.

Its arsenal is growing fast. The Pentagon estimated in its annual report on Chinese military power published in December 2024 that China had more than 600 operational nuclear warheads by the middle of that year and would have more than 1,000 by 2030.

In 2021 researchers using commercial satellite images found fields of what appeared to be missile silos under construction in the deserts of western and northern China, about 300 in all.

The United States has about 3,700 warheads in its stockpile, by the estimates of the Federation of American Scientists.

The last treaty limiting the American and Russian strategic arsenals, New START, expired in February. China was never a party to it.

President Trump has said he would like to negotiate reductions with both Moscow and Beijing. He met President Xi Jinping in Busan last October.

Visits of the kind CNN describes were a feature of the late Cold War, when American and Soviet inspectors watched each other's missiles being destroyed. They built a habit of verification that arms control depended on.

For Japan, which lives within range of Chinese, Russian and North Korean missiles, any opening in China's secrecy about its forces would be welcome. Tokyo has repeatedly asked Beijing to explain the purpose of its build-up.

the time was not right.

For the families of the dead on both sides the date needs no newspaper to mark it.

INTERNATIONAL

Japan and Gaza: Aid, Evacuations, a Park in Jericho and a Decision Not Yet to Recognise

By Aiko Tanaka | Senior Japan Correspondent

Japan has kept a distinctive position in the Middle East: close to the United States, dependent on Arab oil, and on good terms with Israel and the Palestinians alike.

It has been among the largest donors to the Palestinian territories for three decades.

Its best-known project is the Jericho Agro-Industrial Park in the West Bank, part of an initiative launched in 2006 to build Palestinian businesses with Israeli and Jordanian co-operation.

When the war began, the Air Self-Defense Force flew Japanese citizens out of Israel. Japanese aid workers in Gaza were brought out through Egypt later in the autumn.

In January 2024 Japan suspended its funding of UNRWA, the United Nations agency for Palestinian refugees, after Israel accused some of its staff of taking part in the attack. It resumed the funding that April.

It has since given humanitarian aid through United Nations agencies and the Red Cross, and has called repeatedly for the protection of civilians and the release of the hostages.

Last September, when Britain, France, Canada, Australia and others recognised a State of Palestine, Japan did not. Its foreign minister said the question was not whether to recognise but when.

The decision reflected the weight Tokyo gives to its relationship with Washington, which opposed the recognitions.

Since 2013 it has also convened CEAPAD, a forum in which East Asian countries pool technical help for

Palestinian economic development, holding its first meeting in Tokyo.

Japan's interest in the region is also practical. Most of its crude oil comes from the Gulf, and the Houthi attacks on shipping in the Red Sea forced Japanese shipping lines to send vessels round Africa.

INTERNATIONAL

Two Hundred, Then Six Hundred: What Is Known About China's Nuclear Arsenal, and How

By Jonathan Mercer | Senior Editor, International Desk

China does not publish the size of its nuclear forces. What is known comes from American intelligence, published in summary each year by the Pentagon, and from independent analysts working with satellite pictures.

For decades the number barely moved. China tested its first atomic bomb in 1964 and settled on what it called a lean and effective deterrent, a few hundred warheads at most.

The Pentagon's report for 2020 put the stockpile in the low two hundreds. Each report since has raised the figure: more than 400 in 2022, more than 500 in 2023, and more than 600 by the middle of 2024.

The cause of the change was visible from space. In 2021 analysts found three large fields of silos under construction in the west and north of the country, enough to hold some 300 intercontinental missiles.

China has also built up the other two parts of what strategists call a triad: missile submarines on patrol from Hainan, and bombers adapted to carry nuclear weapons.

Beijing states that it will never be the first to use nuclear weapons, a pledge the United States does not make. It says its forces are kept at the minimum necessary for its security.

American officials reply that a force growing this quickly cannot be explained as a minimum, and that without dialogue each side must assume the worst of the other.

The danger is less a deliberate war than a misreading. Without channels of communication, a missile test or an exercise can be mistaken for something else.

That is the argument for visits of the kind CNN reports are being discussed. Seeing a facility tells an inspector little about numbers. It tells both sides that the other is willing to be seen.

China's neighbours, Japan among them, have watched the build-up with alarm and have little say in any talks about it.

INTERNATIONAL

Who Is Fighting Whom in Yemen: A Guide to a War With More Than Two Sides

By Jonathan Mercer | Senior Editor, International Desk

Yemen's war is usually described as a contest between the Houthis and the government. That is true and incomplete.

THE HOUTHIS: formally Ansar Allah, a movement rooted in the Zaydi branch of Shia Islam in the far north. They hold Sanaa and most of the country's population, and are backed by Iran with weapons and expertise.

THE GOVERNMENT: internationally recognised, and since 2022 led by an eight-member Presidential Leadership Council that brought together the leaders of the main anti-Houthi factions. It is based in Aden and in Saudi Arabia.

THE SOUTHERN SEPARATISTS: the Southern Transitional Council wants the south, an independent state until 1990, to be independent again. It has been part of the government and at times in conflict with it.

SAUDI ARABIA: the government's main backer, which intervened in 2015 and has since sought a way out of a war that brought missile and drone attacks on its own cities and oil installations.

THE UNITED ARAB EMIRATES: once the Saudis' main partner in the coalition, it withdrew most of its troops in 2019 but retained influence among southern forces.

Al-Qaeda in the Arabian Peninsula, one of the group's most active branches, has operated in the south and east throughout.

The country was the poorest in the Arab world before the war. Since then its economy has collapsed and

millions depend on aid.

Oil and gas once provided most of the government's revenue. Exports largely stopped after Houthi drone attacks on export terminals in 2022.

Any ground offensive must therefore be read in several ways at once: as a military move against the Houthis, as a test of the government's cohesion, and as a statement of Saudi intentions.

INTERNATIONAL

The Galaxy Leader: The Ship With a Japanese Operator That Became the Houthis' First Prize

By Hana Ito | Research & Archive

The Houthis' campaign against shipping began with a Japanese-operated vessel.

On November 19, 2023, a helicopter landed armed men on the deck of the Galaxy Leader, a car carrier sailing in the southern Red Sea. The ship was operated under charter by Nippon Yusen, the Japanese shipping company known as NYK.

The Houthis said they had seized it because of a link to an Israeli businessman, whose company was reported to be connected to the ship's ownership.

They filmed the boarding and released the video, which became a recruiting advertisement for their cause.

The ship was taken to the Yemeni coast near Hodeidah. It became a kind of attraction, visited by Houthi supporters.

Its 25 crew members, from Bulgaria, Ukraine, the Philippines, Mexico and Romania, were held for more than a year. There were no Japanese among them.

The Japanese government protested and worked through countries with influence over the Houthis, including Oman and Iran, to secure their release.

They were freed in January 2025 and flown to Oman, after the ceasefire in Gaza of that month.

The seizure led shipping lines around the world to reconsider the route through the Red Sea. Many sent their ships round the Cape of Good Hope, adding a week or more to voyages between Asia and Europe.

Japanese companies were among them. The extra distance raised freight costs and, in the end, prices in the shops.

INTERNATIONAL

World Digest

By the International Desk

STOCKHOLM: The Nobel Prize in Physics goes to Francis Halzen of the University of Wisconsin for the detection of high-energy neutrinos from space with the IceCube observatory at the South Pole. The prize in chemistry is announced this evening, Japan time.

WASHINGTON: The United States and China are discussing mutual visits to nuclear facilities, CNN reports.

ADEN: Yemen's government says its forces, supported by Saudi Arabia, have retaken key Houthi strongholds.

JERUSALEM: Israel marks three years since the attack of October 7, 2023.

ROME: Prime Minister Giorgia Meloni applies to register her voice as a trademark to guard against AI imitation.

LOS ANGELES: Paramount has completed its acquisition of Warner Bros. Discovery, valued at about 17 trillion yen. The combined company is to be called Skydance, its chief executive, David Ellison, has said.

BEIJING: The National Day holiday ends. Markets in mainland China reopen on Thursday.

PYONGYANG: North Korea's ruling party marks its anniversary on Saturday.

NEW YORK: The American midterm elections are four weeks away, on November 3.

OSLO: The Nobel Peace Prize is announced on Friday.

WASHINGTON: The Supreme Court opened its new term on Monday, October 5, the first Monday of the month, as it does every year.

BRUSSELS: Most obligations of the European Union's act on artificial intelligence, including the labelling of deepfakes, have applied since August.

ECONOMY



The Tokyo Stock Exchange at Kabutocho. The Nikkei average rose 737 yen on Tuesday to 70,683.98, its first close above 70,000 since July 1, with about three-quarters of Prime market issues higher. (Photo: TG2 (CC))

ECONOMY

Nikkei Closes Above 70,000 for the First Time Since July 1, and This Time Three Shares in Four Rose With It

The index adds 737 yen to 70,683.98; the TOPIX gains 38.34 points to 4,183.56

By Yuki Saito | Economics & Finance Correspondent

The Nikkei average closed above 70,000 on Tuesday for the first time since July 1, finishing the day at 70,683.98, up 737.12 yen, or 1.1 per cent.

On Monday the index had passed 70,000 during the afternoon and slipped back to end 53 yen short. On Tuesday it held the level to the close, Nikkei and Jiji Press report.

The broader TOPIX rose 38.34 points, or 0.9 per cent, to 4,183.56.

The difference from Monday was breadth. About 74 per cent of the issues on the Prime market rose on Tuesday. On Monday, when four expensive shares accounted for about two-thirds of a 1,637-yen gain, only about 56 per cent had.

A rise that lifts three shares in four is a different thing from one carried by a handful of chipmakers. It suggests buying across the market, not a bet on one industry.

Over two sessions the Nikkei has gained about 2,375 yen, recovering Friday's fall of 647 more than three and a half times over.

The yen weakened at the same time, to 158.14 to the

dollar, 48 sen weaker than the day before. A cheaper yen raises the value, in yen, of what exporters earn abroad.

The bond market moved the other way. The coupon on ten-year government bonds auctioned on Tuesday was set at 3.1 per cent, the highest since August 1996, and the long-term interest rate stood at 3.105 per cent.

Higher yields are usually a weight on share prices, because they raise the return available on safer assets. On Tuesday the stock market did not seem to mind.

The governor of the Bank of Japan, Kazuo Ueda, said on Tuesday that underlying inflation was approaching two per cent, a remark that, by the bank's own logic, brings a further rise in interest rates closer.

Markets in mainland China reopen on Thursday after the National Day holiday.

The photograph shows the Tokyo Stock Exchange at Kabutocho.

they ask a higher return to do so.

The prime minister's promise was aimed at them. She told the Diet that funding the tax cut without deficit bonds would keep the confidence of the market.

Whether the market stays willing to lend at that price will be tested at every auction this autumn.

ECONOMY

Coupon and Yield: Two Numbers for the Price of Borrowing, and Why They Differ

By Hana Ito | Research & Archive

A government bond is a promise. The government borrows a fixed sum, say a million yen, and undertakes to repay it on a set date, paying interest every year until then.

The coupon is that annual interest, expressed as a percentage of the sum borrowed. A ten-year bond with a coupon of 3.1 per cent pays 31,000 yen a year on each million.

Once issued, bonds are bought and sold, and their prices change.

If interest rates in the market rise, an old bond paying a lower coupon becomes less attractive, and its price falls until a buyer would earn the going rate on it. If rates fall, its price rises.

The yield is the return a buyer would receive by purchasing a bond at today's price and holding it to maturity. It moves every minute the market is open. The coupon, once set, never changes.

That is why the two numbers reported on Tuesday differ slightly: a coupon of 3.1 per cent on the new bonds, and a market yield of 3.105 per cent on the benchmark issue.

The benchmark ten-year yield is often called simply the long-term interest rate. It is the number that mortgage lenders and corporate treasurers watch.

The finance ministry sets the coupon on each new issue near the market yield, in steps of a tenth of a percentage point, so that the bonds sell at close to

their face value.

When yields rise, buyers of existing bonds lose money on paper. Japanese banks, insurers and pension funds hold large amounts of bonds bought when yields were near zero.

New buyers, on the other hand, are now paid 3.1 per cent a year for lending to the Japanese government for a decade, a return that would have seemed implausible five years ago.

ECONOMY

August 1996, the Last Time the Coupon Was This High: A Nintendo 64, a Prime Minister Named Hashimoto and a Crisis Not Yet Arrived

By Hana Ito | Research & Archive

The last time the government paid this much to borrow for ten years, Ryutaro Hashimoto was prime minister and the economy was in a brief recovery from the collapse of the bubble.

The Bank of Japan's discount rate had been cut to half a per cent the previous September, then the lowest in the bank's history. It seemed very low at the time.

The Nintendo 64 had gone on sale in June. The first Pokemon games had appeared in February, and Yahoo Japan had opened for business in April. The Tamagotchi was three months away.

The coupon of the time reflected a world in which inflation was still positive and growth was expected to resume.

What followed is well known. In April 1997 the consumption tax was raised from three per cent to five. That autumn, as Asian currencies collapsed, Sanyo Securities, Hokkaido Takushoku Bank and Yamaichi Securities failed within a month of each other.

In 1998 two long-term credit banks were nationalised. The economy shrank, prices began to fall, and the long period of deflation began.

Bond yields fell with it. The ten-year yield dropped below one per cent in 1998, and for most of the following quarter-century it stayed below two.

In 2016, after the Bank of Japan introduced negative interest rates, it fell below zero.

Its climb back has taken about four years. The Bank abandoned its control of the yield curve and ended negative rates in 2024, and has since raised its policy rate in steps to 1.25 per cent.

A generation of Japanese savers, borrowers and finance ministers has known nothing but very cheap money. The coupon set on Tuesday is a reminder that the condition was not permanent.

ECONOMY

Ueda Says Underlying Inflation Is 'Approaching 2 Per Cent' and Warns About the Risk of Prices Running Higher

By Yuki Saito | Economics & Finance Correspondent

The governor of the Bank of Japan, Kazuo Ueda, said on Tuesday that the underlying rate of inflation was approaching two per cent, the target the bank has pursued for more than a decade, the Asahi Shimbun reports.

What mattered more, he indicated, was that inflation should settle stably at that level. He added that the risk of prices running above the bank's expectations needed watching.

The words matter because of what the bank has said it needs before it raises interest rates further: confidence that inflation driven by wages and domestic demand, not by import costs, is establishing itself around two per cent.

Jiji Press reported on Monday that the bank was moving towards the judgment that this had happened.

Mr Ueda did not say when the bank would act. Its next policy meeting is on October 29 and 30, when it also publishes its quarterly outlook for prices and growth.

The policy rate is now 1.25 per cent.

Tuesday's remarks came on the afternoon of the securities industry's annual convention, at which both the governor and the finance minister, Satsuki Katayama, were scheduled to speak.

The meaning for policy is plain enough. A bank that says inflation is near its target and warns of the risk

of overshooting is preparing the ground for tighter policy.

That puts the bank and the government on different courses. The prime minister has promised a tax cut and favours what she calls responsible expansionary fiscal policy; the bank is considering making money dearer.

The two need not collide. A tax cut that lowers prices at the till would reduce measured inflation for a year, and a rise in rates would strengthen the yen and cheapen imports.

But the bond market has already registered the combination. The ten-year coupon was set at 3.1 per cent on Tuesday, the highest since 1996.

ECONOMY

From Minus 0.1 to 1.25: How the Bank of Japan Climbed Out of Negative Rates

By Kenta Sakamoto | Data & Visualization

For eight years, from 2016 to 2024, the Bank of Japan charged commercial banks for some of the money they left with it. The rate was minus 0.1 per cent.

It was the last central bank in the world to keep a negative rate.

The policy was part of a larger effort, begun under Governor Haruhiko Kuroda in 2013, to lift inflation to two per cent by buying government bonds on an enormous scale and holding long-term interest rates near zero.

Inflation did eventually come, but from outside: higher prices for energy and food after 2022, and a weak yen that made imports dearer.

Kazuo Ueda, an academic economist, became governor in April 2023 with the task of unwinding the policy without upsetting markets.

In March 2024 the bank ended negative rates and its control of the yield curve, its first rise in rates for seventeen years. It raised its rate to 0.25 per cent that July and to 0.5 per cent in January 2025.

The July rise was followed by the largest one-day fall in the Nikkei's history, in August 2024, a reminder of how sensitive markets had become to any change.

The bank moved more slowly after that, raising its rate to 0.75 per cent in December last year and in further steps since to 1.25 per cent.

Each rise has been justified in the same terms: that wages were rising and that firms were passing on costs in a way they had not for decades.

The question now is how far it goes. The bank has said that real interest rates, after allowing for inflation, remain very low. Its next step, if it follows recent practice, would take the rate to 1.5 per cent.

ECONOMY

The Yen Weakens to 158.14 to the Dollar, Close to the Levels That Brought Intervention Two Years Ago

By Yuki Saito | Economics & Finance Correspondent

The yen fell to 158.14 to the dollar on Tuesday, 48 sen weaker than a day earlier.

The movement was modest. The level is not. It is within two yen of 160, the line near which the finance ministry intervened in the currency market in 2024.

A weak yen has two faces. It raises the yen value of what exporters earn abroad and of what Japanese investors hold overseas, and it makes the country cheaper for visitors.

It also raises the price of everything Japan imports, from crude oil and liquefied gas to wheat and animal feed. Those costs reach households in their electricity bills and at the supermarket.

That is why a government promising relief from prices has an interest in the currency.

The basic force behind the yen's weakness has been the difference between interest rates. Even after several rises, Japanese rates remain below American ones, so that money earns more in dollars.

The Bank of Japan's governor said on Tuesday that underlying inflation was approaching two per cent, which by the bank's own logic brings a further rise in Japanese rates closer. In principle that would support the yen.

The market's reaction to the prime minister's fiscal

ECONOMY

plans pulls the other way. Investors who doubt that a tax cut will be paid for tend to sell both the currency and government bonds.

The finance ministry does not say in advance at what level it would act, and says only that it watches for excessive movements.

For now the yen is falling slowly, which the ministry has in the past been readier to tolerate than a sudden drop.

ECONOMY

The Line at 160: The Four Days in 2024 When the Finance Ministry Bought Yen

By Hana Ito | Research & Archive

Japan intervenes in the currency market rarely, and secretly at first. The finance ministry confirms what it has done only when it publishes its monthly figures.

Its most recent campaign came in 2024.

On April 29, a national holiday when Tokyo's markets were thin, the yen fell past 160 to the dollar for the first time in 34 years. Within hours it had jumped back by several yen. The ministry later confirmed that it had bought yen on that day and again on May 1.

The two operations together cost about 9.8 trillion yen, the largest monthly total on record.

In July, after the yen fell to nearly 162, the ministry intervened again, on July 11 and 12, spending about 5.5 trillion yen more.

Two years earlier it had acted for the first time since 1998, buying yen in September and October 2022, when the currency passed 145 and then approached 152.

Intervention cannot reverse the forces behind a currency's movement. It can punish speculators who bet on a one-way fall, and buy time.

The money comes from Japan's foreign reserves, among the largest in the world. The ministry sells dollars and buys yen.

Many in the market give the Bank of Japan's rise in interest rates at the end of July 2024, more than the money spent, the credit for turning the yen that summer.

Officials have never said that 160 is a line. Traders treat it as one.

ECONOMY

Electric Car Sales in Japan Rise Two and a Half Times in the Half-Year, With Subsidies Doing Much of the Work

By Ethan Cole | Technology & Science Editor

Sales of electric vehicles in Japan rose about two and a half times in the first half of this fiscal year, from April to September, compared with a year earlier, the morning papers report. Subsidies gave a boost.

The increase is from a low base. Japan has been among the slowest of the large car markets to adopt battery-powered cars, which have made up only a small share of new car sales.

The country's carmakers chose a different route. Toyota built its lead in hybrids, which combine an engine with an electric motor and need no charging, and Japanese buyers took to them in large numbers.

Several things have changed. More models are on sale, including small kei cars such as the Nissan Sakura, whose short range matters less for local driving, and imports from China's BYD, which entered the Japanese market in 2023.

Japanese makers have begun to answer with battery models of their own, and Chinese makers have announced electric kei cars built for Japanese roads.

The government's subsidy for clean-energy vehicles reduces the price of an electric car by a substantial sum, and some local governments add their own.

Charging has improved but is still the main complaint of buyers. The government's target is 300,000 charging points by 2030.

The official aim is that all new passenger cars sold from 2035 should be electrified, a definition that includes hybrids.

The half-year figures suggest that the market is now moving. They also suggest how much of that movement depends on public money, which can be withdrawn.

Carmakers will watch the second half closely. The

subsidy budget is finite, and when it runs low, purchases can be brought forward and then slow.

ECONOMY

Kansai Could Be Short of 3.36 Million Workers by 2050, an Estimate Finds

By Kenji Fukuda | Real Estate & Urban Development

The Kansai region could face a shortage of 3.36 million workers by 2050, according to an estimate reported this week.

The region, centred on Osaka, Kyoto and Kobe, has about 20 million people and is the country's second economic centre after the Tokyo area.

The arithmetic is driven by population. Kansai's population is ageing and declining faster than Tokyo's, and its young people continue to move east for work and study.

Industries that depend on people rather than machines will feel the shortage first: nursing and care, construction, transport and logistics, retailing and restaurants.

The figure is large beside the region's present workforce, and it will not be met by any single measure.

The usual answers are four: more work from older people and from women, more foreign workers, higher productivity through automation, and the attraction of people from elsewhere in Japan.

Kansai has spent heavily on the last. The Osaka Expo of 2025 was intended in part to raise the region's profile, and an integrated resort with a casino is under construction on the artificial island of Yumeshima, where the Expo was held, for opening around 2030.

Those projects create demand for labour as well as attracting it, which is one of the difficulties of planning for a shortage.

Kansai's universities are among its strengths, but many of their graduates take their first jobs in Tokyo.

The national picture is no better. A study published in 2023 by the Recruit Works Institute estimated that Japan as a whole would be short of about 11 million workers by 2040.

ECONOMY

Where the Workers Will Come From: Older People, Women, Machines and Two Million Foreign Employees

By Kenta Sakamoto | Data & Visualization

Japan's working-age population, those aged 15 to 64, reached its peak in 1995 at about 87 million. It has fallen by more than 13 million since.

The total number of people at work has nonetheless risen, because more older people and more women are working than ever before.

Those two sources are approaching their limits. Most women of working age are already in the labour force, many in part-time jobs, and the number of people in their sixties is no longer growing.

The third source is foreign workers. Their number reached a record of more than 2.3 million in October 2024, according to the health and labour ministry, more than double the figure of a decade earlier.

The largest groups come from Vietnam, China and the Philippines. They work in factories, on building sites, in care homes and in the convenience stores of every city.

The government is replacing the technical intern training programme, long criticised as exploitative, with a new system intended to develop skills and allow workers to change employers. It is due to begin in 2027.

The fourth source is machines. Restaurants have introduced ordering by tablet and serving robots, warehouses automated sorting and picking, and construction firms remote-controlled equipment.

Productivity, the output of each hour worked, has long been lower in Japan than in other rich countries, which suggests room for improvement and also how hard improvement has been.

The regional dimension sharpens everything. Tokyo continues to draw people from the rest of the country, so that the shortage elsewhere is greater than the national figures suggest.

Estimates such as Kansai's are not forecasts of what will happen. They measure the gap that must be

closed if it is not to happen.

ECONOMY

Toyota's Vice Chairman Promotes a 'Japanese-Style' Approach to Self-Driving, With Government and Industry Together, Aiming for Zero Accidents

By Ethan Cole | Technology & Science Editor

Toyota Motor's vice chairman is promoting what he calls a Japanese-style approach to autonomous driving, developed jointly by the public and private sectors with the aim of reducing traffic accidents to zero, the morning papers report.

The phrase sets out a contrast. In the United States and China, self-driving taxis have been developed largely by technology companies competing with one another, in cities that have allowed them to operate.

The Japanese approach as Toyota describes it would rely more on co-ordination: carmakers, infrastructure, road authorities and regulators working to common standards.

Its stated goal is safety, not novelty. Japan's road deaths fell in 2024 to 2,663, the lowest since records began in 1948 and less than a sixth of the peak of 1970. Most of the remaining accidents involve human error.

Japan has had a legal framework for fully driverless operation in defined areas, known as Level 4, since April 2023. The first service under it began that May in the town of Eiheiji, in Fukui Prefecture, on a short route for small electric carts.

The government aims to have such services operating in about 100 places by the end of fiscal 2027, mainly buses and shuttles in rural areas that are losing their drivers.

Toyota has made its own moves. It agreed last year to explore co-operation with Waymo, the self-driving company owned by Google's parent, and it opened Woven City, its experimental town at the foot of Mount Fuji in Susono, last September.

The labour shortage is the argument that may matter most. Bus and taxi companies across the country have cut services because they cannot hire drivers.

The approach has critics, who say that co-ordination takes time while competitors abroad gather data from millions of kilometres of driving.

Zero accidents is an aspiration rather than a target. It is also a useful reminder of what the technology is supposed to be for.

ECONOMY

Markets at a Glance

By the Markets Desk

NIKKEI 225: 70,683.98, up 737.12 (1.1%). First close above 70,000 since July 1.

TOPIX: 4,183.56, up 38.34 (0.9%).

BREADTH: about 74% of Prime market issues higher.

TWO DAYS: Nikkei up about 2,375 yen since Friday's close.

TEN-YEAR BOND: coupon on Tuesday's auction 3.1%, highest since August 1996.

LONG-TERM RATE: 3.105%.

YEN: 158.14 to the dollar, 48 sen weaker on the day.

BANK OF JAPAN: policy rate 1.25%. Next meeting October 29 and 30.

GOVERNOR UEDA: underlying inflation 'approaching 2%'.

CHINA: mainland markets reopen Thursday.

BUSINESS

Business Digest

By the Business Desk

LEAKS: Yakiniku King's app: about 10.78 million records taken by unauthorised access; names, phone numbers and e-mail addresses, no payment data (Nikkei). Daiwa Securities: about 220,000 records (Sankei). Times Car: up to about 6.6 million, including some 1.6 million licence images.

BOOKS: A Nippan group company sold Japanese books to the American AI developer Anthropic for about a year from December 2024 without publishers' permission; the publishers' association has asked for an explanation.

CARS: Electric vehicle sales up about 2.5 times in the April-September half on a year earlier.

TOYOTA: The vice chairman promotes a 'Japanese-style' approach to self-driving aimed at zero accidents.

MEDIA: Paramount completes its purchase of Warner Bros. Discovery; the combined company will be called Skydance.

LABOUR: Kansai could be 3.36 million workers short by 2050, an estimate finds.

BONDS: The ten-year coupon rises to 3.1%, the highest since August 1996.

STOCKS: The Nikkei average closes at 70,683.98, its first close above 70,000 since July 1.

BANK OF JAPAN: Governor Ueda says underlying inflation is approaching 2%.

EXCHANGE: The Tokyo Stock Exchange is carrying out the second stage of its reform of the TOPIX index this month.

BUSINESS

Paramount Completes Its Purchase of Warner Bros. Discovery for About 17 Trillion Yen; the Combined Company Will Be Called Skydance

By Naomi Kato | Culture & Society Editor

Paramount has completed its acquisition of Warner Bros. Discovery, in a deal valued at about 17 trillion yen, or some 110 billion dollars, the morning papers report. The combined company is to be called Skydance.

Its chief executive, David Ellison, announced the name last week, Bloomberg reported.

The transaction brings under one owner two of the oldest names in Hollywood and a large share of American television news.

Paramount brings its film studio, the CBS network, the Paramount+ streaming service and cable channels including MTV and Nickelodeon. Warner Bros. Discovery brings the Warner Bros. studio, HBO and its streaming service, the DC comics characters, the Discovery channels and CNN.

The route to the deal was unusually contested. Skydance, the production company founded by Mr Ellison, merged with Paramount in August last year.

Warner Bros. Discovery, which had planned to split itself in two, agreed in December to sell its studios and streaming business to Netflix. Paramount answered with a hostile offer for the whole company, and in February Warner's board accepted Paramount's improved terms.

Mr Ellison is the son of Larry Ellison, the founder of Oracle, whose fortune has backed the Paramount purchases.

The questions now concern what the owner does with what it has bought: how many jobs go in the merger, whether the two streaming services are combined, and how CNN and CBS News are run under one roof.

Japanese audiences see the companies' work through cinema distributors and streaming services, whose arrangements may change as the new owner reviews its contracts.

The deal is among the largest in the history of the entertainment industry.

BUSINESS

Park24: From Coin-Operated Car Parks to Japan's Largest Car-Sharing Service, and a Judo Team

By Kenji Fukuda | Real Estate & Urban Development

Anyone who has parked in a Japanese city has probably paid Park24. Its yellow Times signs mark tens of thousands of small car parks, many on plots too narrow to build on.

The business model is simple. The company rents vacant land from its owners, installs barriers or locking plates and payment machines, and charges by the minute.

From that network it built a second business. Times Car, its car-sharing service, parks cars in the same lots, and members unlock them with a card or a smartphone and pay by the quarter-hour.

It became the largest car-sharing service in Japan, used by people who need a car occasionally and do not want the expense of owning one in a city.

To join, a member registers a driving licence. That requirement is why the breach included images of

BUSINESS

licences: they are kept to confirm that each member is entitled to drive.

Up to about 6.6 million records may have been exposed, including some 1.6 million licence images, according to the reports.

Park24 is also known in sport. Its judo team is home to Uta Abe and Hifumi Abe, the sister and brother who each won world titles in Baku on Monday.

The car-sharing business grew quickly as younger city dwellers gave up owning cars. Its value depends on trust that the cars, and the data, are looked after.

Car-sharing companies around the world hold similar information, and licence images have become a target because they are accepted as proof of identity.

Park24's handling of its customers in the weeks ahead will be watched by its competitors as closely as by its members.

TECHNOLOGY

A Nobel for Catching Neutrinos From Space in a Cubic Kilometre of Antarctic Ice

Francis Halzen, who led the IceCube observatory, wins the physics prize; Chiba University's team found the first neutrinos to pass a peta-electronvolt

By Maya Suzuki | Science & Innovation Desk

The Nobel Prize in Physics was awarded on Tuesday to Francis Halzen of the University of Wisconsin-Madison for the detection of high-energy neutrinos of cosmic origin with IceCube, the observatory he led, which is buried in the ice at the South Pole.

The Royal Swedish Academy of Sciences announced the prize in Stockholm at a quarter to seven in the evening, Japan time.

IceCube is a telescope unlike any other. It occupies a cubic kilometre of ice, in which more than 5,000 light sensors hang on 86 cables at depths between about 1,450 and 2,450 metres.

What it looks for are neutrinos, among the most abundant particles in the universe and the hardest to catch. They have almost no mass and no electric charge, and pass through ordinary matter, the Earth included, almost without effect.

That is their value to astronomers. Light from distant objects is absorbed or scattered on its way to us. Neutrinos travel in straight lines from where they were made, carrying information out of places no telescope can see into.

Very occasionally a neutrino strikes an atom in the ice and produces a charged particle that travels faster than light can through ice. It leaves a faint blue glow, which the sensors record. From the pattern of light the direction and energy of the neutrino can be worked out.

What it found

In 2013 the IceCube collaboration reported the first evidence of high-energy neutrinos coming from beyond the solar system, a flux that could not be explained by particles made in the Earth's atmosphere.

Chiba University was part of that discovery. Its team, in a search for neutrinos of extremely high energy, found the first two events above a peta-electronvolt, a thousand trillion electronvolts. The physicists named them Bert and Ernie. They were first announced at a conference in Kyoto in 2012.

In 2018 the observatory traced a neutrino to its source for the first time: a blazar, a galaxy whose central black hole fires a jet towards the Earth, about four billion light years away.

In 2022 it found evidence of a second source, the active galaxy known as Messier 77, and in 2023 it produced the first picture of our own galaxy, the Milky Way, made with neutrinos instead of light.

The man

Mr Halzen was born in Belgium and has spent most of his career at Wisconsin, where he went in the early 1970s.

In the late 1980s he argued that the deep Antarctic ice, clear and dark and stable, could be used as a detector. He was among the founders of the forerunner experiment, AMANDA, in the 1990s and became the principal investigator of IceCube, whose last cable was lowered into the ice in December 2010.

He is this year's recipient of the American Physical Society's medal for exceptional achievement in research.

Neutrino physics has served Japan well in Stockholm. Masatoshi Koshiiba won the prize in 2002 for detecting neutrinos from a supernova with Kamiokande, and Takaaki Kajita in 2015 for showing with Super-Kamiokande that neutrinos have mass.

The prize in chemistry is announced this evening.

TECHNOLOGY

Bert, Ernie and Big Bird: How a Team From Chiba Found the First Neutrinos From Deep Space

By Maya Suzuki | Science & Innovation Desk

Among the institutions that share in Tuesday's Nobel is Chiba University, a member of the IceCube collaboration whose physicists made one of its most important finds.

The university's International Center for Hadron Astrophysics, led by Professor Shigeru Yoshida, specialises in the highest-energy particles in the universe. Professor Aya Ishihara is among its leading members.

Its team ran IceCube's search for neutrinos of extremely high energy, the rarest and most informative kind. The search was designed to pick out the very brightest events and to reject the far more numerous particles produced by cosmic rays striking the atmosphere above the pole.

Neutrinos of such energies cannot be made in any laboratory on Earth.

In data recorded in August 2011 and January 2012 the search turned up two events of a size nobody had seen before. Each deposited a little more than one peta-electronvolt of energy in the ice. The Large Hadron Collider at CERN, the most powerful accelerator ever built, gives its protons less than a hundredth of that.

Both were cascades, compact balls of light rather than long tracks, the signature of a neutrino colliding inside the detector itself.

The collaboration named them after the puppets of Sesame Street, Bert and Ernie. A third, larger event found soon afterwards was called Big Bird.

The first two were announced at the international neutrino conference held in Kyoto in June 2012. Their publication the following year, together with the wider analysis that followed, established that IceCube was seeing neutrinos from beyond the solar system.

The finding opened a new branch of astronomy. Before it, the only neutrinos detected from beyond the Earth had come from the Sun and from a single supernova in 1987.

Chiba has remained central to the experiment since, in analysis and in building instruments for its expansion.

The prize goes to the observatory's leader, but the Japanese contribution to the result it honours is a matter of record.

TECHNOLOGY

How to Build a Telescope Inside a Glacier: Hot Water, Eighty-Six Holes and Seven Summers

By Ethan Cole | Technology & Science Editor

IceCube could only have been built at the South Pole. The ice there is nearly three kilometres thick, and below about 1,400 metres it is so old and compressed that it is almost free of air bubbles and as clear as any material on Earth.

To put instruments into it, the builders used hot water. A drill sprayed water heated to near boiling into the ice, melting a hole about 60 centimetres wide and two and a half kilometres deep in a day and a half or so.

Into each hole, before it froze again, a cable was lowered with 60 sensors attached.

Each sensor is a glass sphere about the size of a basketball, containing a photomultiplier tube sensitive enough to register a single particle of light, together with electronics that time its arrival to within a few billionths of a second.

Drilling was possible only in the Antarctic summer, from November to February, when aircraft can land at the pole. The work took seven seasons, from 2004 to 2010.

Once frozen in, the sensors cannot be recovered or repaired. Almost all of them are still working.

The data are filtered by computers at the pole and the

most interesting events sent north by satellite.

The project cost about 280 million dollars, most of it paid by the United States' National Science Foundation, with contributions from Germany, Sweden, Belgium and other countries. It is run by a collaboration of several hundred scientists from more than a dozen countries.

An upgrade is adding new cables with more sensitive sensors near the centre of the array, and a far larger successor, IceCube-Gen2, has been proposed.

Chiba University has contributed to the next generation of instruments, including a new sensor design, the D-Egg, built around two light detectors in a single elongated glass shell.

Each sensor was fastened to its cable by hand as the cable went down the hole.

TECHNOLOGY

The Ghost Particle: What a Neutrino Is, and Why Sixty Billion Pass Through Your Fingernail Every Second

By Hana Ito | Research & Archive

The neutrino began as a guess. In 1930 the Austrian physicist Wolfgang Pauli proposed that an invisible particle must be carrying away energy that seemed to vanish in certain radioactive decays.

He thought it might never be detected. Enrico Fermi gave it its name, Italian for 'little neutral one', and built it into a theory of radioactive decay.

It took a quarter of a century to prove that it existed. In 1956 Clyde Cowan and Frederick Reines detected neutrinos streaming from a nuclear reactor in South Carolina. Reines shared a Nobel Prize for it in 1995.

Neutrinos are made in nuclear reactions everywhere: in the Sun, in reactors, in the Earth's own rocks, in the collisions of cosmic rays with the atmosphere, and in the most violent events in the universe.

About 60 billion neutrinos from the Sun pass through every square centimetre of the Earth, and of each person on it, every second, by day and by night.

Almost all of them pass straight through. A neutrino could cross a light year of lead with a good chance of not being stopped.

That is why detectors must be enormous: tanks of tens of thousands of tonnes of water deep underground, as in Japan's Kamioka mine, or a cubic kilometre of ice, as at the South Pole.

There are three kinds, or flavours, linked to the electron and its two heavier cousins. Neutrinos change from one flavour to another as they travel, which can only happen if they have mass.

How much mass is still not known exactly. It is less than a millionth of the mass of an electron.

The neutrinos IceCube detects from deep space are the most energetic ever recorded, and they come from places where particles are accelerated by black holes to energies far beyond anything a laboratory can reach.

TECHNOLOGY

A Mine in Gifu and Two Nobel Prizes: Japan's Long Partnership With the Neutrino

By Maya Suzuki | Science & Innovation Desk

No country has done more with the neutrino than Japan, and the work began by accident.

Kamiokande, a tank of 3,000 tonnes of pure water in a zinc mine at Kamioka in Gifu Prefecture, was built in the early 1980s to look for the decay of protons, which theory predicted and which it never found.

On February 23, 1987, it recorded eleven neutrinos in thirteen seconds. They came from a star that had exploded in the Large Magellanic Cloud, a small galaxy near our own, the first supernova visible to the naked eye in nearly four centuries.

Masatoshi Koshiiba, who led the experiment, shared the Nobel Prize in Physics in 2002 for the detection of cosmic neutrinos.

Its successor, Super-Kamiokande, holds 50,000 tonnes of water and began observations in 1996.

In 1998 its scientists showed that neutrinos produced in the atmosphere changed their type on the way through the Earth, proof that they have mass. Takaaki Kajita shared the prize in 2015 for that discovery.

Other experiments followed: KamLAND, which measured neutrinos from Japan's nuclear power

stations, and T2K, which fires a beam of neutrinos 295 kilometres under the country from Tokai, in Ibaraki, to Kamioka.

The next instrument is Hyper-Kamiokande, a tank several times larger, under construction near the original site and due to begin observations later this decade.

Japanese physicists have also been partners in the experiments of other countries, Chiba's team at the South Pole among them.

Tuesday's prize was not awarded to a Japanese. It honoured a field that Japanese scientists did much to create.

TECHNOLOGY

A Blazar, a Galaxy and Our Own Milky Way: The Three Sources IceCube Has Found

By Ethan Cole | Technology & Science Editor

For several years after 2013, IceCube knew that high-energy neutrinos were arriving from space and could not say where any of them came from.

The breakthrough came on September 22, 2017. The observatory recorded a single neutrino of very high energy and, within a minute, sent an automatic alert giving its direction to telescopes around the world.

NASA's Fermi gamma-ray telescope found that a known object in that direction was flaring: a blazar called TXS 0506+056, in the constellation Orion.

A blazar is a galaxy with a supermassive black hole at its centre that drives a jet of particles at nearly the speed of light, pointed almost directly at the Earth. Ground telescopes confirmed the flare, and the result was published in July 2018.

It was the first time a source of high-energy cosmic neutrinos had been identified, and a demonstration of what astronomers call multi-messenger astronomy.

In 2022 the collaboration reported a second source: NGC 1068, or Messier 77, an active galaxy about 47 million light years away whose core is hidden from ordinary telescopes by dust.

In 2023 it published the first view of the Milky Way in neutrinos. The analysis relied on machine learning to pick out faint signals from the band of the galaxy against a large background.

Each finding answered one question and raised others, chiefly how black holes accelerate particles to such energies.

Most of the high-energy neutrinos IceCube has detected still cannot be traced to any particular source.

Finding them will need larger detectors, which is why the collaboration has proposed IceCube-Gen2, roughly eight times the volume of the present array.

TECHNOLOGY

Chemistry Tonight: The Third Nobel of the Week, and a Prize Japan Won Last Year

By Maya Suzuki | Science & Innovation Desk

The Nobel Prize in Chemistry is announced in Stockholm today at a quarter to seven in the evening, Japan time.

Japan won it last year. Susumu Kitagawa of Kyoto University shared the 2025 prize with Richard Robson and Omar Yaghi for developing metal-organic frameworks, crystalline materials full of holes that can trap gases or water from the air.

He was the ninth Japanese laureate in chemistry.

The first was Kenichi Fukui, in 1981, for his theory of chemical reactions. Hideki Shirakawa followed in 2000 for conductive plastics, Ryoji Noyori in 2001 for catalysts, and Koichi Tanaka in 2002 for a method of analysing large molecules.

Osamu Shimomura won in 2008 for discovering the green fluorescent protein of a jellyfish, Akira Suzuki and Ei-ichi Negishi in 2010 for reactions that join carbon atoms, and Akira Yoshino in 2019 for the lithium-ion battery.

Two of those discoveries are in this week's other prizes. The fluorescent protein is a basic tool of the optogenetics honoured on Monday, and lithium-ion batteries power the newest Japanese submarines.

The committee does not publish a shortlist. Nominations are kept secret for fifty years.

Chemistry prizes have increasingly gone to work at the border with biology and materials science, and in

TECHNOLOGY

2024 the prize went to the use of artificial intelligence to predict the structures of proteins.

The literature prize is announced on Thursday, the peace prize on Friday and the prize in economic sciences next Monday.

Each prize is presented in Stockholm, or in the case of peace in Oslo, on December 10, the anniversary of Alfred Nobel's death.

TECHNOLOGY

Yakiniku King's App: 10.78 Million Records Taken, Names, Numbers and E-Mail Addresses Among Them

By Daisuke Ito | Investigations & Longform

About 10.78 million records were taken through unauthorised access to the smartphone app of Yakiniku King, the grilled-meat restaurant chain, Nikkei reports.

The information leaked includes customers' names, telephone numbers and e-mail addresses.

Dates of birth and passwords were not included. Payment information was not exposed because none was registered in the app, the report says.

Yakiniku King is operated by Monogatari Corporation, a restaurant company based in Toyohashi, Aichi Prefecture, which also runs ramen and shabu-shabu chains. Its restaurants, mostly on suburban roads, offer grilled meat at fixed prices for a set time.

Restaurant chains use such apps for reservations, waiting lists and discount coupons. Customers register to use them, and the app keeps what they enter.

The size of the breach reflects the popularity of the chain and of the app, not the sensitivity of the data. Each record on its own is of little value.

In bulk it is useful to fraudsters. A list of real names linked to working telephone numbers and e-mail addresses can be used to send messages that appear to come from the chain or from another company, inviting recipients to enter passwords or card details on a fake site.

Customers who used the app should treat with suspicion any message about their account, a refund or a prize, and should go to the company's official site directly rather than through a link.

A company in Japan that suffers a leak caused by unauthorised access must report it to the Personal Information Protection Commission and notify those affected.

The breach comes as a security company's count shows leaks at a record 506 cases this year.

How the intruders gained access was not stated in the reports available on Wednesday morning.

TECHNOLOGY

1.6 Million Driving-Licence Images: Why the Times Car Breach Is the One to Worry About

By Daisuke Ito | Investigations & Longform

Of the breaches in the news this week, the one at Times Car is the second largest in number of records and the most serious in kind.

Up to about 6.6 million records may have been exposed at the car-sharing service run by Park24, among them some 1.6 million images of driving licences.

A Japanese driving licence carries its holder's photograph, name, address and date of birth. Because almost every adult driver has one, it is the document most widely accepted as proof of identity.

Since 2018 banks, brokers, mobile phone companies and payment services have been allowed to verify customers online, without a face-to-face meeting. One of the commonest methods is for the customer to photograph an identity document and send the picture, often with a photograph of his own face.

An image of someone else's licence is therefore a key to impersonation. Criminals have used such images to open bank accounts, take out loans and register telephone lines in other people's names.

The weakness of photographed documents has been recognised. The government has decided to phase out identity checks that rely on images of documents in favour of reading the chip in the My Number card, which cannot be copied by photographing it.

Until that change is complete, licence images remain

valuable to criminals.

Anyone whose licence image may have been exposed can do little about the licence itself. What they can do is watch for accounts opened or loans taken out in their name, and report anything unexplained to the police.

Credit information agencies can show what credit has been taken out in a person's name.

The service requires the licence for a sound reason: to confirm that each driver is entitled to drive. Keeping the images, and keeping them safe, is a separate question.

TECHNOLOGY

Three to Five Days, Then Thirty or Sixty: What the Law Requires of a Company After a Leak

By Hana Ito | Research & Archive

Until April 2022, a Japanese company that lost its customers' data was asked, not required, to report it. The amended Act on the Protection of Personal Information changed that.

A report to the Personal Information Protection Commission is now compulsory in four kinds of case.

The first is a leak of sensitive information, such as medical records or criminal history. The second is a leak of data that could be used to cause financial loss, such as credit card numbers. The third is a leak caused with wrongful intent, which covers attacks by intruders and theft by employees. The fourth is any leak affecting more than 1,000 people.

The company must make a preliminary report promptly, which the commission's guidelines interpret as within about three to five days of discovering the problem.

A full report must follow within 30 days, or within 60 days where the leak was caused deliberately, since such cases take longer to investigate.

The people affected must also be told, or, where that is impossible, the facts must be made public.

That is why leaks now tend to come to light in a sequence: a first announcement saying that something may have happened, then a second with numbers, then a third with the cause.

The commission can give guidance, request reports, inspect and issue orders. A company that defies an order faces criminal penalties, which for a corporation can reach 100 million yen.

There is no administrative fine of the European kind, calculated as a share of turnover. Whether to introduce one has been discussed in the law's periodic reviews.

The rise in reported leaks since 2022 is partly a rise in leaks and partly a rise in reporting. The two cannot easily be separated.

TECHNOLOGY

When the Machine Finds the Flaw: How AI Changed the Hunt for Vulnerabilities, for Attackers and Defenders

By Ethan Cole | Technology & Science Editor

A vulnerability is a mistake: a line of code that fails to check what it is given, a setting left open, a password never changed. Finding one used to require skill and patience.

Machines have helped for years. Fuzzing, the technique of throwing millions of malformed inputs at a program to see what breaks it, is decades old.

What large language models add is something closer to reading. They can examine code, explain what it does, suggest where a mistake is likely and write the small program needed to test it.

Defenders proved the point first, in public. In 2024 Google reported that an AI agent it had built had found a previously unknown, exploitable flaw in SQLite, one of the most widely used pieces of software in the world.

In 2025 an American defence research agency held the final of a two-year competition for AI systems that find and fix vulnerabilities automatically, at the hacking conference DEF CON in Las Vegas.

Attackers have followed. In November last year Anthropic, the American AI developer, reported that it had detected and disrupted a campaign by a group it assessed to be sponsored by the Chinese state, which used its AI tools to carry out much of an intrusion operation against about thirty organisations

with little human direction.

The security company whose count the Yomiuri reports today lists the use of AI to find weak points among the methods behind this year's record number of leaks in Japan.

The effect is to shorten the time between a flaw being introduced and its being exploited. Organisations that patch their systems slowly are the most exposed.

The same tools are available to defenders, and the security industry argues that they must use them as fast as attackers do.

The numbers are rising on both sides. The international association of security response teams has forecast a record 66,000 vulnerabilities for this year, in what ITmedia called an era in which AI digs up too many.

TECHNOLOGY

A Nippan Company Sold Japanese Books to Anthropic for a Year Without Publishers' Consent, and Says It Did Not Know They Were for AI

The publishers' association asks the wholesaler for an explanation; publishers fear the books were cut up, scanned and thrown away

By Naomi Kato | Culture & Society Editor

A company in the group of Nippon Shuppan Hanbai, Japan's largest book wholesaler, sold Japanese books to the American artificial intelligence developer Anthropic for about a year from December 2024, without the permission of their publishers, the Yomiuri Shimbun and Daily Sports report.

The company says it did not know that the books were to be used to train AI.

The Japan Book Publishers Association has sent Nippan a letter of inquiry asking for an explanation. Advertimes, a media trade publication, reported the association's demand under a headline describing a mass sale of Japanese books.

Publishers fear that the books were cut apart, scanned and then discarded, according to the reports.

The reports available on Wednesday morning did not say how many books were sold, which titles, or for how much.

The fear has a basis in the American public record. In a lawsuit brought by authors in the United States, a federal judge in San Francisco described in a ruling in June 2025 how Anthropic had bought print books in large numbers, removed their bindings, scanned the pages and disposed of the paper.

The judge held that this use of lawfully purchased books to train AI was permitted under American law as fair use. He did not extend that protection to copies Anthropic had downloaded from pirate websites, and the company later agreed to pay 1.5 billion dollars to settle the authors' claims over them.

In Japan, too, the law permits the use of works to train AI, with an exception where the use would unreasonably harm the rights holder. And once a book has been sold, its owner may resell it without the publisher's consent.

The publishers' complaint, as reported, is that their permission was not sought. The wholesaler, for its part, says it did not know the purpose of the purchases.

The reports did not include a response from Anthropic.

The case is not the company's only dispute in Japan. In August thirty-five companies, among them a subsidiary of the Sony Group, sued Anthropic over the use of song lyrics, Kyodo News reported.

The association's letter asks Nippan to account for the sales. What it does with the answer will show whether Japanese publishers mean to treat the matter as a commercial complaint or a legal one.

TECHNOLOGY

The American Case: A Judge's Ruling on Scanned Books, and a Settlement of 1.5 Billion Dollars

By Rachel Kim | Washington-Tokyo Liaison

The background to the Japanese publishers' concern is a case decided in San Francisco last year.

In August 2024 three American authors sued Anthropic, alleging that it had used their books without permission to train its AI models. The case was brought as a class action on behalf of other

authors.

The judge, William Alsup, ruled on the central questions in June 2025.

He found that using books to train an AI system was fair use under American copyright law, because the purpose was transformative: the model learned from the books to produce something different, as a person learns from reading.

He also found that Anthropic's practice of buying print books, cutting off their bindings, scanning them and destroying the paper copies was fair use, since it replaced one lawfully owned copy with a digital one.

But he refused to excuse the company's downloading of millions of books from pirate websites, which he said could not be justified by a later use, and he set that part of the case for trial.

Before the trial, Anthropic agreed to pay 1.5 billion dollars to settle the claims, about 3,000 dollars for each of roughly half a million works. The court gave the settlement its preliminary approval in September 2025.

The settlement covered books registered with the United States Copyright Office, a step that Japanese publishers rarely take.

The ruling on purchased books is one of the leading American decisions on the point, though it does not bind other courts.

On that reasoning, books legitimately bought and scanned in the United States would have been used lawfully there. The Japanese publishers' quarrel, if they pursue one, is with how the books came to be sold.

TECHNOLOGY

Article 30-4: The Clause That Made Japan One of the Easiest Countries in Which to Train AI

By Hana Ito | Research & Archive

Japan's copyright law has an unusually generous provision for machine learning, and it was written before the present boom in AI.

Article 30-4, added by an amendment that took effect in January 2019, permits the use of a copyrighted work without the owner's permission where the purpose is not to enjoy the thoughts or feelings it expresses.

Analysing data, including the training of AI models, is the main example given.

The permission has a limit. It does not apply where the use would unreasonably prejudice the interests of the copyright holder, given the nature of the work and the manner of use.

For several years the clause led foreign commentators to call Japan a paradise for machine learning. Japanese creators, illustrators and voice actors among them, objected that their work could be absorbed without consent or payment.

In 2024 the Agency for Cultural Affairs published a general understanding of how the clause applies. It said, among other things, that training aimed at reproducing the style or expression of particular works could fall outside it, and that ignoring technical measures by which a site forbids the collection of its content could count against the user.

The clause concerns copying. It says nothing about how the copies are obtained.

That is why the Nippan case raises a different question. Buying a physical book is lawful, and once it is sold the publisher cannot control its resale. Scanning it in the United States is governed by American law, not Japanese.

What the publishers can question is whether the wholesaler, which handles their books under agreements with them, was entitled to sell in bulk to a buyer abroad.

That is a matter of contract and of trade practice, not of the copyright clause, and it is why the association's first step was a letter to Nippan.

TECHNOLOGY

How a Book Reaches a Japanese Shop: Wholesalers, Consignment and a Fixed Price

By Naomi Kato | Culture & Society Editor

In most countries a bookshop orders books from publishers or from a distributor and pays for what it orders. Japan's system is different.

TECHNOLOGY

Most new books and magazines reach shops through two large wholesalers, known as toritsugi: Nippon Shuppan Hanbai, called Nippan, and Tohan.

The wholesalers do more than deliver. They decide in large part which shops receive how many copies of each new title, collect payment and handle the money between thousands of publishers and thousands of shops.

Most books are supplied on consignment. A shop may return unsold copies, within limits, and receive a refund. The system lets small shops stock a wide range of titles without risk, and it means that a large share of books printed come back.

Prices are fixed. A book's price is set by its publisher and printed on its cover, and shops may not discount new books. The resale price maintenance system for books and magazines is an exception permitted under the competition law.

The system was designed for a market that grew every year. It has struggled as the market has shrunk.

Sales of printed books and magazines have fallen for most of the past three decades, and the number of bookshops has roughly halved since the turn of the century. Many towns now have none.

The wholesalers have cut back too. Nippan stopped supplying books and magazines to two of the big convenience-store chains in February 2025, leaving that business to others.

The wholesalers' central position is what made the sale to Anthropic possible: they hold large stocks of a great range of titles and can supply them in bulk.

It is also what makes the publishers' complaint pointed. They depend on the wholesalers, and the wholesalers depend on their trust.

TECHNOLOGY

Active Cyber Defence Is Now in Force: What the Authorities May Do, and What Waits Until Next Autumn

By Hana Ito | Research & Archive

Since October 1 the Japanese authorities have had the legal power to enter and disable servers being used to attack the country's networks. The laws on active cyber defence, enacted in May last year, took effect in stages, and that power is now in force.

The laws rest on three pillars.

The first is co-operation with industry. Operators of critical infrastructure, such as power, telecommunications, finance and transport, must report serious attacks to the government and share information about the systems they use.

The second is the use of communications information. The government may analyse data about communications passing through Japan to or from other countries, such as addresses and timings but not the content of messages, to detect attacks. This part begins next autumn.

The third is the power to act. With the approval of an independent commission, the police may access an attacker's server and render it harmless. In cases of organised attacks that the police cannot handle, the Self-Defense Forces may do so.

The independent commission was created to answer the constitutional objection. Article 21 of the constitution guarantees the secrecy of communications, and critics argued that monitoring traffic, even without reading it, intrudes on that right.

The laws also reorganised the government's cyber security effort under a new National Cyber Office in the Cabinet Secretariat.

Japan had lagged its allies. The United States and Britain have conducted offensive operations against attackers' infrastructure for years, and American officials had pressed Tokyo to improve its defences as a condition of deeper intelligence sharing.

The laws do not protect private companies directly. A restaurant chain or a broker whose customer data is stolen must still look after its own systems.

What they change is the state's ability to strike back at the infrastructure attackers use, and with this year's record number of leaks there is no shortage of it.

ELSEWHERE IN TODAY'S PAPER

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TECHNOLOGY

A Chiba University Drone Carries Medicine Just Above the Water and Under Five Bridges, Rehearsing for a Disaster

By Ethan Cole | Technology & Science Editor

Researchers at Chiba University have tested the delivery of medicines by a drone flying just above the surface of the water and passing beneath five bridges, in an experiment designed around a disaster, the morning papers report.

The idea is to use waterways as routes when roads are blocked. After an earthquake or a flood, bridges and roads may be damaged or jammed with traffic, while rivers and canals remain open.

Flying low over water and under bridges is harder than it sounds. Bridges can block the satellite signals a drone uses to fix its position, and the aircraft must hold its height precisely over a moving surface while staying clear of the structure above.

Medicines are among the most urgent needs after a disaster. People with chronic illnesses can be without their regular drugs within days if pharmacies are cut off.

Drones have already been used for the purpose in Japan. After the Noto Peninsula earthquake of January 2024, they carried medicines to communities isolated by landslides.

The rules have been loosened to allow it. Since December 2022 drones have been permitted to fly beyond the operator's sight over populated areas, under strict conditions, and since December 2023 a simpler procedure has allowed such flights over sparsely populated areas without observers on the ground.

Chiba University has a long record in the field. ACSL, one of Japan's leading makers of industrial drones, grew out of research by one of its professors; its aircraft made Japan Post's first delivery flight under the new rules, in Okutama, in western Tokyo, in March 2023.

The details of the latest experiment, including the distance flown and the load carried, were not given in the reports available.

Experiments of this kind are a step towards plans that local governments can adopt before a disaster comes. Agreements between municipalities, pharmacists and drone operators are needed in advance; there is no time to negotiate them afterwards.

The country's experience of typhoons this autumn is a reminder of why. The ground in parts of Chiba is still loose after the rain of Typhoon No. 25.

TECHNOLOGY

Minokamo Counts Its Council Election in an Hour and Seven Minutes, by Machine

By Kenta Sakamoto | Data & Visualization

The city of Minokamo, in Gifu Prefecture, used electronic voting machines in its city council election, and the count was finished in one hour and seven minutes.

It is the fifth local election to use electronic voting since the internal affairs ministry revised its guidelines on the equipment.

With paper ballots, counting a council election in a city of Minokamo's size takes most of the evening. Every handwritten name must be read and judged, and ballots whose intention is unclear must be debated.

Electronic voting removes that work. The voter chooses a candidate on a screen at the polling station, the choice is recorded electronically, and there can be no unreadable or spoiled ballots.

Japan allowed electronic voting in local elections in 2002, under a law passed the year before. The city of Niimi, in Okayama Prefecture, used it first, that June.

Its reputation never recovered from what happened next door to Minokamo. In the city of Kani, in July 2003, machines failed during the council election, and voting was disrupted. The courts declared the election invalid, a decision upheld by the Supreme Court in 2005.

Most of the municipalities that had tried electronic voting gave it up, citing cost and doubts about reliability. Voting in national elections remains on paper.

The revised guidelines permit more widely available equipment, which is cheaper, and the few municipalities that have adopted it since have reported quick counts.

The objections have not disappeared. A paper ballot can be recounted; an electronic record must be trusted, and the security of the machines must be demonstrated to voters who cannot see inside them.

Minokamo's hour and seven minutes will be cited by advocates. Its neighbour's experience twenty-three years ago will be cited by everyone else.

TECHNOLOGY

October 7, 1959: A Soviet Probe Photographs the Side of the Moon No Human Had Seen

By Hana Ito | Research & Archive

Sixty-seven years ago today, a Soviet spacecraft looked at the far side of the Moon and took the first pictures of it.

The Moon always turns the same face to the Earth, because its rotation is locked to its orbit. Until 1959 nobody knew what the other side looked like.

Luna 3 was launched on October 4, 1959, two years to the day after Sputnik. It swung around the Moon and, on October 7, with the Sun lighting the far side, its camera began taking photographs.

There was no digital camera. The probe photographed on film, then developed, fixed and dried the film on board, scanned the images with a beam of light and transmitted them to Earth by radio as it returned towards the planet.

Twenty-nine photographs were taken, covering about 70 per cent of the far side. The images that reached the ground were grainy and faint, but they showed something unexpected.

The far side was different. It had almost none of the dark plains, the maria, that give the near side its familiar face. It was rough and heavily cratered.

The Soviet Academy of Sciences named the features it could see. A dark patch became the Sea of Moscow; craters were named after Tsiolkovsky, Lomonosov and Jules Verne. A bright streak labelled the Soviet Mountains turned out later not to be mountains at all.

The probe was also an engineering first: to point its camera, it held its orientation in three axes using light sensors and small gas jets, an early example of the attitude control every spacecraft now uses.

Better maps followed in the 1960s, and in December 1968 the crew of Apollo 8 became the first people to see the far side with their own eyes.

Japan's lunar orbiter Kaguya mapped the whole Moon in detail from 2007, and in 2019 China's Chang'e 4 made the first landing on the far side.

TECHNOLOGY

October 7, 1952: A Patent for a Bull's-Eye of Lines That Became the Barcode

By Kenta Sakamoto | Data & Visualization

On October 7, 1952, the United States Patent Office granted patent number 2,612,994 to two young engineers, Norman Joseph Woodland and Bernard Silver, for a 'classifying apparatus and method'.

It was the barcode.

The two had met at Drexel Institute of Technology in Philadelphia after Silver overheard a supermarket executive asking how goods could be identified automatically at the checkout.

Woodland's idea came, by his own account, on a beach in Florida, when he drew the dots and dashes of Morse code in the sand with his fingers and pulled them down into lines, thick and thin.

Their patent described a pattern of concentric circles, a bull's-eye that could be read from any angle.

It was decades ahead of the technology needed to read it. Practical scanning had to wait for the laser and the cheap computer.

The rectangular Universal Product Code was adopted by American grocers in 1973. The first item scanned at a checkout, on June 26, 1974, in Troy, Ohio, was a packet of chewing gum.

Japan adopted its own version, the JAN code, in 1978, and it is printed today on nearly everything sold in a Japanese shop.

Japan's own contribution came in 1994. Masahiro

Hara of Denso Wave, a Toyota group company, designed the QR code to track car parts on assembly lines, storing far more information in a square of black and white modules. It now carries payments, menus and tickets around the world.

Woodland and Silver sold their patent for 15,000 dollars. It expired before the barcode became universal.

TECHNOLOGY

October 7, 2008: The First Asteroid Spotted Before It Hit the Earth Falls on the Sudanese Desert

By Maya Suzuki | Science & Innovation Desk

On October 6, 2008, an astronomer at the Catalina Sky Survey in Arizona, Richard Kowalski, found a small, faint object moving quickly across the sky.

Calculations within hours showed that it was on a collision course with the Earth. It was the first time an asteroid had been discovered before it struck.

It was small, about four metres across, too small to do harm on the ground. It was designated 2008 TC3.

Astronomers had about nineteen hours. They used them to predict where and when it would arrive, and observatories around the world turned to watch it.

It entered the atmosphere over northern Sudan before dawn on October 7, as predicted, and exploded high over the Nubian Desert. The crew of a KLM airliner flying over Chad saw the flash.

Two months later a team led by the American astronomer Peter Jenniskens and students and staff of the University of Khartoum walked the desert along the predicted track and found fragments. Hundreds were eventually recovered.

The meteorites, named Almahata Sitta after a railway station nearby, proved to be of a rare type, mixed with fragments of many other kinds, as if the asteroid had been assembled from pieces of different bodies.

The event was a demonstration of planetary defence: if a dangerous object were found in time, its arrival could be predicted to within minutes and miles.

Japan contributes to the same effort. A spaceguard centre in Okayama Prefecture tracks objects near the Earth, and the Hayabusa missions returned samples from two asteroids, Itokawa in 2010 and Ryugu in 2020.

Several more small asteroids have been detected before impact since 2008. Each was found only hours ahead, which shows how much remains to be done.

TECHNOLOGY

On This Day in Technology: October 7

By the Technology Desk

1919: KLM, the Dutch airline, is founded. It is the oldest airline still flying under its original name.

1952: Norman Joseph Woodland and Bernard Silver are granted the patent for the barcode.

1959: Luna 3 photographs the far side of the Moon.

2008: Asteroid 2008 TC3, found the day before, falls over Sudan; a KLM crew sees the flash.

ALSO THIS WEEK, OCTOBER 1, 1982: Sony's CDP-101, the first compact disc player, goes on sale in Japan.

OCTOBER 3, 1985: The space shuttle Atlantis makes its first flight.

OCTOBER 4, 1957: Sputnik 1, the first artificial satellite, is launched.

OCTOBER 4, 1959: Luna 3 is launched, two years to the day after Sputnik.

OCTOBER 5, 2026: The Nobel Prize in Physiology or Medicine is awarded for optogenetics.

OCTOBER 6, 2026: The Nobel Prize in Physics is awarded for the detection of cosmic neutrinos with IceCube.

TECHNOLOGY

Technology Digest

By the Technology Desk

LEAKS: A security company's count puts leaks of personal information this year at a record 506 cases, the Yomiuri reports; attackers' use of AI to find vulnerabilities is among the methods.

DAIWA: About 220,000 records leaked at Daiwa Securities, the Sankei Shimbun reports. Details of what was taken were not given.

TECHNOLOGY

PHISHING: A group tracked as TA419 has imitated the official website of the defence minister, Shinjiro Koizumi, in a phishing operation, according to reports.

CYBER DEFENCE: Powers to neutralise attackers' servers are in force from October 1; the analysis of communications information begins next autumn.

RANSOMWARE: The Qilin suspect detained in Osaka was handed to Germany on October 2; the group was behind the attack on Asahi Group last year.

AI AND BOOKS: A Nippan group company sold books to Anthropic; the publishers' association asks for an explanation.

VOICE: Italy's prime minister applies to register her voice as a trademark.

DRONES: Chiba University tests delivery of medicines under five bridges.

VOTING: Minokamo counts its council election electronically in 1 hour 7 minutes.

NOBEL: Physics to Francis Halzen for IceCube; chemistry announced this evening.

SOCIETY

The Commission That Watches Over Personal Data: What It Can Do, and What It Cannot

By Hana Ito | Research & Archive

The body to which Yakiniku King, Daiwa Securities and Times Car must report is the Personal Information Protection Commission.

It was established in January 2016, growing out of a smaller commission created two years earlier to supervise the handling of My Number data. It is an independent administrative commission, like the Fair Trade Commission, and does not take instructions from ministers in individual cases.

It enforces the Act on the Protection of Personal Information across the private sector, and since 2022 and 2023 across national and local government as well.

Its powers are to collect reports, to inspect, to give guidance and advice, and to issue recommendations and orders. A company that defies an order commits a crime.

In practice most of its work is guidance. It publishes the details of serious cases and the measures it has asked companies to take, and the publicity itself is a sanction that companies take seriously.

Its best-known recent cases have concerned large platforms. When the messaging company LINE Yahoo disclosed in 2023 that hundreds of thousands of records had been exposed through a system shared with its South Korean co-owner, Naver, the commission issued guidance, and the internal affairs ministry, in administrative guidance of its own, pressed the company to reduce its dependence on Naver.

Its staff is small for the size of the task: a few hundred people to oversee the data practices of every company in the country.

The law under which it works is reviewed every three years. The introduction of administrative fines on the European model, and of a system for groups of consumers to seek damages together, have been discussed in the reviews and opposed by business groups.

A record year of leaks will strengthen the case for both.

The commission's website lists the reports it has received and explains how members of the public can make inquiries or complaints.

SOCIETY

A Heavy Year, Then a Light One: Why Cedar Pollen Comes in Waves

By Hana Ito | Research & Archive

Japanese cedar does not produce the same amount of pollen every year. Heavy springs are often followed by light ones.

The reason lies in the trees' budget. A tree that has spent its energy on a great quantity of flowers and pollen has less to spare the following year.

The weather of the summer before is the other factor. Male flower buds form from July onwards. Hot, sunny summers with little rain encourage many buds; cool, wet ones discourage them.

Forecasters therefore look back at the summer's temperatures, hours of sunshine and rainfall, and then go into the forests in the autumn to count the buds on sample trees.

The forecasts are expressed relative to the previous spring and to the average of recent years, which is why a forecast of half this year's level can still be close to normal if this year was heavy.

The pollen season itself begins earlier in warm regions. In Kyushu and Shikoku cedar pollen can fly from early February; in Tohoku it begins in March.

Cypress pollen follows cedar in April and affects many of the same people.

Pollen counts on the day depend on the weather: dry, windy, warm days after rain bring the highest counts, and rain brings relief.

Measures to reduce exposure are familiar: masks and glasses outdoors, keeping windows closed, and brushing coats before coming indoors.

Cedar plantations cover about 4.4 million hectares, roughly an eighth of the country's land area, much of it on hillsides within reach of the cities.

Varieties of cedar that produce little or no pollen have been developed and are being planted as old trees are felled.

Elsewhere hay fever has other causes: ragweed in North America, grass pollen in Britain and much of Europe.

For the many people who plan their spring around the forecast, next year's first estimate is welcome news.

SOCIETY

If Your Details Were in a Leak: Six Things to Do This Week

By Daisuke Ito | Investigations & Longform

Millions of people have been told this year that their personal information may have leaked. For most of them nothing visible happens. Here is how to keep it that way.

FIRST, read the company's notice. A genuine notice explains what was taken. If names, telephone numbers and e-mail addresses leaked but no passwords or card numbers, the main risk is messages pretending to be from someone you trust.

SECOND, distrust messages that use your name. Fraudulent texts about undelivered parcels, unpaid bills, account suspensions or refunds are common. Do not follow their links. Go to the company's site or app by your usual route.

THIRD, change passwords that you have used more than once. If one service's password leaks, criminals try the same e-mail address and password on others. A different password for each important service stops that.

FOURTH, use two-step verification where it is offered, especially for banks, brokers and e-mail. A stolen password is then not enough.

FIFTH, check your statements. Look at bank, card and telephone bills for anything you do not recognise, and tell the company at once.

SIXTH, if an image of your driving licence or other identity document may have leaked, watch for accounts or loans in your name. Credit information agencies will tell you what credit has been taken out against your name.

If you are contacted by someone claiming to be from the police or a bank and asking for money or for your card, hang up and call the organisation on a number you find yourself.

Help is available. The consumer hotline is 188, and the police consultation line, for matters that are not emergencies, is #9110.

No one can undo a leak. Most of the harm that follows it can be prevented by a little suspicion.

SOCIETY

Loose Ground in Chiba and Kanagawa After Typhoon No. 25: Why Slopes Stay Dangerous After the Rain Stops

By Emi Kondo | Society & Local News

Forecasters have warned that the ground in parts of Chiba and Kanagawa prefectures is still loose after the rain brought by Typhoon No. 25, and that landslides are possible even after modest further rain.

The danger outlasts the storm because water stays in the soil. A slope saturated by heavy rain holds that

water for days, and the weight and pressure it adds reduce the friction that keeps the soil in place.

Further rain falling on wet ground has nowhere to go and can trigger a slip that the same rain on dry ground would not.

Both prefectures have many slopes at risk. Chiba's hills are made of soft sedimentary rock and sand that erode easily, and Kanagawa has steep residential areas built on hillsides around Yokohama, Kamakura and Yokosuka.

The meteorological agency's warnings take account of rain that has already fallen, through an index of the water stored in the soil. That is why a landslide warning can be issued for rain that seems light.

The signs of danger are well known: water suddenly springing from a slope or turning muddy, small stones falling, cracks in the ground, or a smell of earth, and creaking from trees on the hillside.

Anyone who notices them should move away from the slope at once and inform the municipality.

Hazard maps published by every municipality show which areas are designated as at risk of landslides. Residents of those areas are advised to know the route to their evacuation site before rain begins.

The forecast for the rest of the week is mostly dry, which will help the ground to recover.

The two new typhoons in the Pacific are not forecast to bring heavy rain to Kanto in the coming days.

Both prefectures remember 2019, when Typhoon Faxai in September and Typhoon Hagibis in October brought destructive wind, floods and landslides.

SOCIETY

A Raccoon in a Tree Outside Kawasaki Station

By Emi Kondo | Society & Local News

A raccoon was spotted in a tree in front of Kawasaki Station, one of the busiest stations in the Kanagawa area, the morning papers report.

The sight of a wild animal in the middle of a city's commercial centre drew attention. It should not entirely surprise anyone who lives in Kanagawa.

Raccoons are not native to Japan. They come from North America, and those living wild here are descended from animals imported as pets, many in the years after a popular animated series about a boy and his raccoon was broadcast in 1977.

Raccoons are cute as cubs and difficult as adults, and many were released or escaped. With no natural enemies and plenty of food, they spread.

Kanagawa has been among the prefectures most affected. Raccoons have damaged crops, raided kitchens and nested in the roofs of houses and of historic temples and shrines.

The species was designated an invasive alien species under the law that took effect in 2005, which forbids keeping, breeding, releasing or transporting it without permission. Local governments run programmes to trap them.

Raccoons can carry diseases and parasites, and they bite when cornered. The advice to anyone who meets one is not to approach it, not to feed it, and to contact the municipality.

They are mainly active at night, so a raccoon seen in a tree by day may have been disturbed or may be resting.

Raccoons climb and swim well and travel along rivers, drains and railway embankments, which lets them move through a city largely unseen. A tree is the natural refuge for one that has been surprised.

How this one came to be at the station, and what became of it, was not described in the reports available.

It is a reminder that the animals are now part of the life of the city, whether or not anyone asked for them.

SOCIETY

Today's Map: Sunshine Across Most of the Country, 29 in Kagoshima, 26 in Tokyo, and a Cool 11 in Sapporo This Morning

By Kenta Sakamoto | Data & Visualization

Typhoon No. 27 is pulling away to the north-east and most of Japan is sunny today, according to the weather map supplied for this edition, which gives forecast highs, this morning's lows and the sky for 19 cities.

Its outlook reads: Sendai, Osaka, Kochi and Kagoshima have sun all day, and Aomori, Akita and Nagano brighten after a cloudy start. Tokyo reaches 26 degrees with sunny spells after early cloud. Niigata stays mostly cloudy, and Matsue is cloudy for much of the day before clearing.

Kagoshima is the warmest city, at 29. Kochi and Naha reach 28 and Nagoya 27.

The morning was cool in the north. Sapporo's low was 11 degrees, the lowest of the 19 cities, and Kushiro's 12.

Nagano has the lowest high, at 20, under a sunny sky.

Tokyo's figures are 26 and 20. Its low is the second highest on the map, after Naha's 24.

The widest spread of the day is at Kochi, 13 degrees between a low of 15 and a high of 28. The narrowest is at Naha, four degrees.

Matsue is the only city whose sky changes during the day, from cloud to sun. Sapporo, Kushiro, Kanazawa, Tokyo, Kyoto, Takamatsu, Fukuoka and Naha have sun with some cloud, and Niigata cloud with some sun.

The map shows Typhoon No. 27 in the Pacific off its right-hand edge, about 920 kilometres east of Sendai at 6 a.m. Nos. 28 and 29 are beyond the map, about 2,300 and 2,620 kilometres from Chichijima.

The map cites the Japan Meteorological Agency: the highs and sky are from the forecast issued at 5 a.m., the lows are observed minimums up to 8:10 a.m., and the typhoon is from the 6:45 a.m. bulletin.

The full map and the chart of all 19 cities are on the weather page.

SOCIETY

Three Arrested on Suspicion of Forging Life-Insurance Documents; a Man Who Lived With Them Later Died

By Daisuke Ito | Investigations & Longform

Police have arrested three people on suspicion of forging documents for life insurance, the morning papers report. A man who lived with them later died.

The reports available did not give the names of the suspects, the place, or the amount of insurance involved.

The arrests are for the forgery of documents. The reports do not say that anyone has been accused of causing the man's death.

Under Japanese law a person who forges a private document with the intention of using it, such as an insurance application bearing another person's signature, commits a crime under the Penal Code. Using the document is a separate offence.

Life insurance on another person's life is closely regulated. The Insurance Act requires the consent of the person insured before a policy can be taken out on his life, and insurers require his signature to show it.

The rule exists because of the obvious danger: that someone might insure another person's life without his knowledge and then profit from his death.

Insurers check applications and claims, and cases where the insured dies soon after a policy is taken out receive particular scrutiny.

Cases in which documents have been forged to insure a relative or companion have come before the courts in the past, some with grave consequences.

In this case the arrests so far concern forgery, and the suspects are presumed innocent.

The reports did not say how the man died or whether his death is under investigation.

SOCIETY

Today's Cautions

By the Society Desk

High waves on the Pacific coast.

Stay off rocks and breakwaters.

Loose slopes in Chiba and Kanagawa.

Cool mornings in the north.

Leaked data: beware of texts.

Do not follow unknown links.

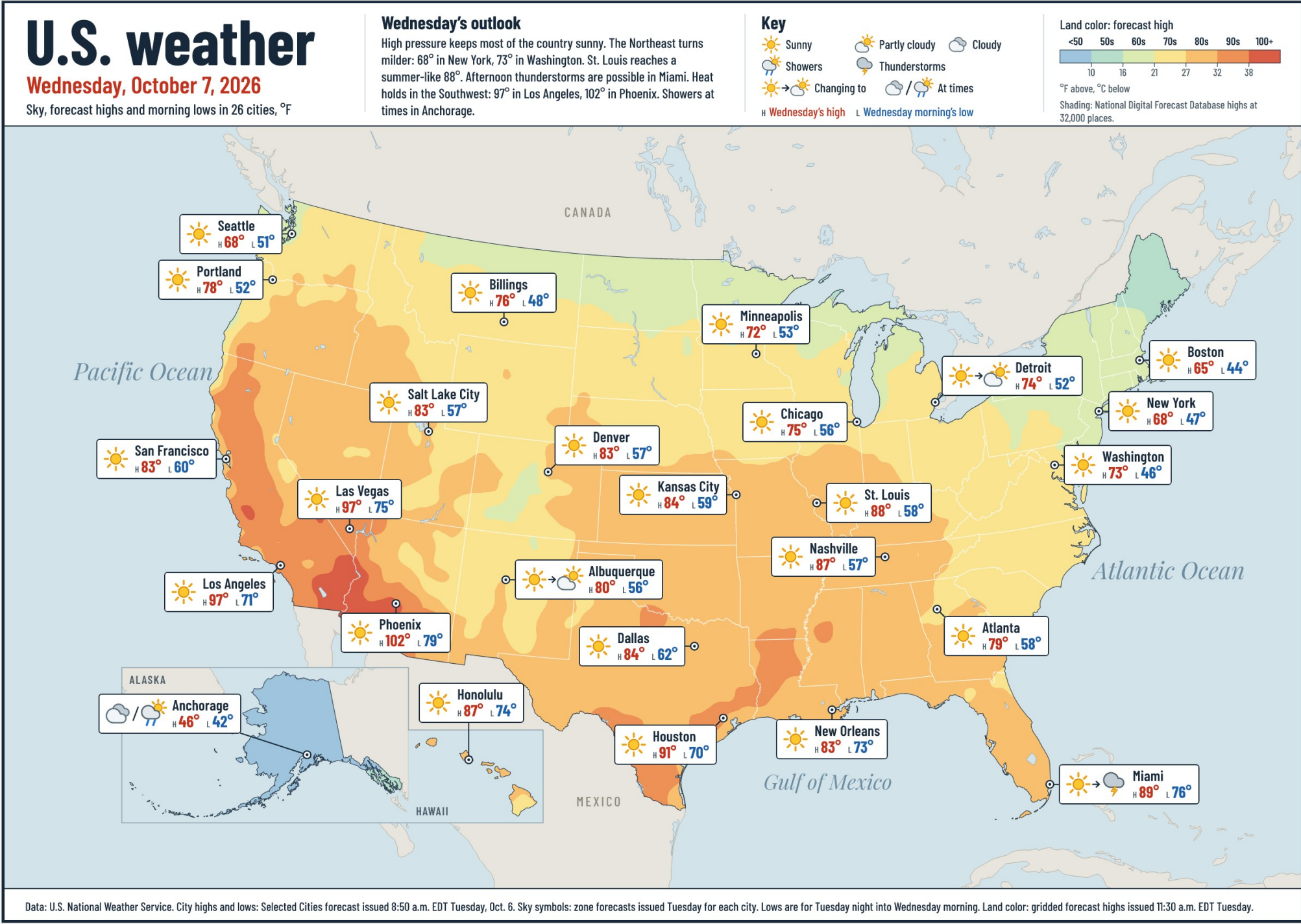
Change reused passwords.

Island ferries: check first.

Raccoons: do not approach.

Consumer hotline: 188.

WEATHER ABROAD



United States weather for Wednesday, October 7, 2026: the sky, forecast highs and morning lows in degrees Fahrenheit for 26 cities, in the map supplied for this edition. (Data: U.S. National Weather Service selected-cities forecast issued at 8:50 a.m. Eastern time on Tuesday, with gridded forecast highs issued at 11:30 a.m.)

SOCIETY

Weather Abroad: 102 in Phoenix and 97 in Los Angeles, a Milder Northeast and a Summer Day in St. Louis

By Kenta Sakamoto | Data & Visualization

High pressure keeps most of the United States sunny on Wednesday, according to the map of 26 cities supplied for this edition. The figures are forecast highs and lows in degrees Fahrenheit.

The heat holds in the Southwest. Phoenix reaches 102 degrees, about 39 Celsius, the highest on the map, and Las Vegas and Los Angeles 97. San Francisco reaches an unusually warm 83.

Phoenix also has the warmest night, with a low of 79, ahead of Miami's 76 and Las Vegas's 75.

The Northeast turns milder: 68 in New York and 73 in Washington, with sunshine. Boston, at 65 with a low of 44, is the coolest of the cities in the lower 48 states.

St. Louis reaches a summer-like 88, and Nashville 87. Kansas City has 84, Chicago 75 and Minneapolis 72.

Afternoon thunderstorms are possible in Miami, where sunshine gives way to storms with a high of 89. Detroit and Albuquerque turn partly cloudy after a sunny start.

In Texas, Houston reaches 91 and Dallas 84. New Orleans has 83, with a low of 73.

The West is sunny: Seattle 68, Portland 78, Salt Lake City and Denver 83, Billings 76.

Anchorage is cloudy with showers at times, 46 and 42, the only city on the map without sunshine.

The map's data are from the National Weather Service's forecast for selected cities issued at 8:50 a.m. Eastern time on Tuesday; the sky symbols are from the zone forecasts for each city, the lows are for Tuesday night into Wednesday morning, and the colour of the land shows the gridded forecast highs issued at 11:30 a.m.

To convert Fahrenheit to Celsius, subtract 32 and multiply by five-ninths. Seventy degrees is about 21 Celsius; 100 is about 38.

SOCIETY

Society Digest

By the Society Desk

KAWASAKI: A raccoon is spotted in a tree in front of Kawasaki Station.

INSURANCE: Three people are arrested on suspicion of forging life-insurance documents; a man who lived with them later died.

HYOGO: Freelance journalists are barred from the governor's press conferences.

ATAMI: Typhoon No. 27 disrupts shipping and tourism; seven sailings between Ito and Izu Oshima are cancelled.

COAST: Swell continues off the Ogasawara and Izu Islands and the Kanto coast. Keep away from the shore.

SLOPES: Ground in Chiba and Kanagawa remains loose after Typhoon No. 25.

POLLEN: Next spring's cedar pollen is forecast at about half this year's level in Kanto and about 30 per cent in Tohoku.

DRONES: Chiba University tests the delivery of medicines under five bridges.

VOTING: Minokamo, in Gifu, counts its council election electronically in 1 hour 7 minutes.

NAHA: The investigation into the killing of a woman in a hotel continues; the Marine arrested denies the allegation.

ELSEWHERE IN TODAY'S PAPER

Yana asked the land ministry in February, Page 5.

America and China discuss nuclear-site visits, Page 7.

Nikkei closes above 70,000, Page 8.

SPORTS

Hanshin Beat Hiroshima 2-1: Otake Wins His Seventh and Kudo Saves His Twelfth

By Haruto Yamamoto | Sports Reporter

The Central League champions, Hanshin, beat Hiroshima 2-1 on Tuesday, Nikkei reports. Kotaro Otake was the winning pitcher, his seventh win of the season, and Kudo earned his twelfth save.

The game was one of the last of the regular season for a team whose real work begins a week today.

Hanshin clinched the pennant on Saturday, while the players were at their hotel in Hiroshima watching the Giants lose at Tokyo Dome. It was the club's first title in consecutive years in the Central League, and the first back-to-back of any kind in 88 years.

Otake, a left-hander, joined Hanshin from SoftBank through the draft of under-used players held at the end of 2022 and won twelve games in the championship season of 2023. He has been a dependable member of the rotation since.

Kudo's season has been one of the stories of the year. He was moved into the closer's role and became one of the most reliable in the league. He lost in the eleventh inning on Sunday, against DeNA, and was back on Tuesday to finish a one-run game.

A narrow win with the closer on the mound is what Hanshin will need in October.

The manager, Kyuji Fujikawa, himself one of the great closers of his era, has won the pennant in each of his first two seasons in charge. His team reached the Japan Series last year and lost it.

When the regular season is done, Hanshin wait. The final stage of the Climax Series begins at Koshien on

Wednesday, October 14, and Hanshin start it one win up against whoever emerges from the first stage between the Giants and DeNA.

The waiting is a familiar dilemma for champions: rest for tired players, and the risk of losing the edge that games provide.

Hiroshima's season is over. They finished outside the top three.

Attendance at Koshien has been close to capacity all season.

SPORTS

The Climax Series Schedule: First Stages From Saturday, Koshien From Wednesday Week, and Day Games at the Weekend

By Kenta Sakamoto | Data & Visualization

The regular season is over, and the dates of the play-offs are set.

CENTRAL LEAGUE, FIRST STAGE: The Yomiuri Giants, second, against DeNA, third, at Tokyo Dome from Saturday, October 10.

CENTRAL LEAGUE, FINAL STAGE: The winner against Hanshin at Koshien from Wednesday, October 14. Hanshin start with one win.

PACIFIC LEAGUE, FIRST STAGE: Seibu, second, against Nippon-Ham, third, at Seibu's stadium in Tokorozawa from Saturday, October 10.

PACIFIC LEAGUE, FINAL STAGE: The winner against SoftBank in Fukuoka. SoftBank start with two wins, under the rule for champions that finish ten or more games clear.

Games on Saturdays and Sundays are played in the daytime only, according to NTV and the league's announcements.

The first stages are the best of three, on consecutive days. If the third day is needed it falls on Monday, the Sports Day holiday.

The stadiums in the first stage are both roofed, so the weather, and Typhoon No. 29, can affect spectators' journeys but not the games.

The final-stage winners meet in the Japan Series, the best of seven games.

The Giants finished the season with 76 wins, 64 defeats and 3 draws, five games ahead of DeNA, at 71-69-3.

SPORTS

Koshien in October: The Ballpark Built for Schoolboys That Hanshin Fill Every Night

By Hana Ito | Research & Archive

Koshien Stadium, where the Central League's final stage begins a week today, was completed in 1924, and it was built for the national high school baseball tournament, not for professionals.

When it opened it was the largest ballpark in Asia.

Its name comes from the year of its completion, kinoe-ne in the old sixty-year calendar, written with the characters read koshi.

The stadium stands in Nishinomiya, between Osaka and Kobe. It is owned by the Hanshin railway company, which also owns the Tigers.

Twice a year it still belongs to the schools. The spring invitational tournament is held in March and the summer championship in August, and the professional team leaves on a long road trip each summer to make way for it.

Its ivy-covered outer walls and the dark soil of its infield are part of its legend. Players eliminated from the summer tournament traditionally scoop some of the soil into a bag to take home.

The stadium was renovated between 2007 and 2010, and its capacity today is a little under 48,000.

Hanshin's supporters are the most devoted in Japanese baseball, and their singing carries across the stadium from the first pitch.

Attendance has been close to capacity all season.

Hanshin lost the Japan Series last year after winning the final stage at Koshien. Its supporters will be hoping for a different ending.

SPORTS

Emperor's Cup Tonight: Urawa Meet Omiya in a Saitama Derby; Cerezo Osaka Host Kagoshima and Hiroshima Play Iwaki

By Oliver Brooks | Sports Desk Editor

Three ties in the Emperor's Cup are played on Wednesday: Urawa Reds against Omiya, Cerezo Osaka against Kagoshima United, and Sanfrecce Hiroshima against Iwaki FC.

The first is the one Saitama will watch. Urawa and Omiya are neighbours in the same city, Saitama, and their meetings are among the most heated in Japanese football.

They have rarely met in recent seasons, since the two clubs have spent much of the past decade in different divisions.

Omiya have changed since they last met in the league. The club was bought by the Red Bull drinks company in 2024 and now plays as RB Omiya Ardija.

Urawa are among the most successful clubs in the competition's history. They have won it four times under their present name, most recently in 2021, and four times more as Mitsubishi Motors.

Cerezo Osaka won the cup in 2017. Their opponents, Kagoshima United, are the club of the southern Kyushu city whose name they carry.

Hiroshima have a more painful record. As Toyo Kogyo they won the cup three times in the 1960s, but under the Sanfrecce name they have lost a string of finals, the last of them to Ventforet Kofu on penalties in 2022.

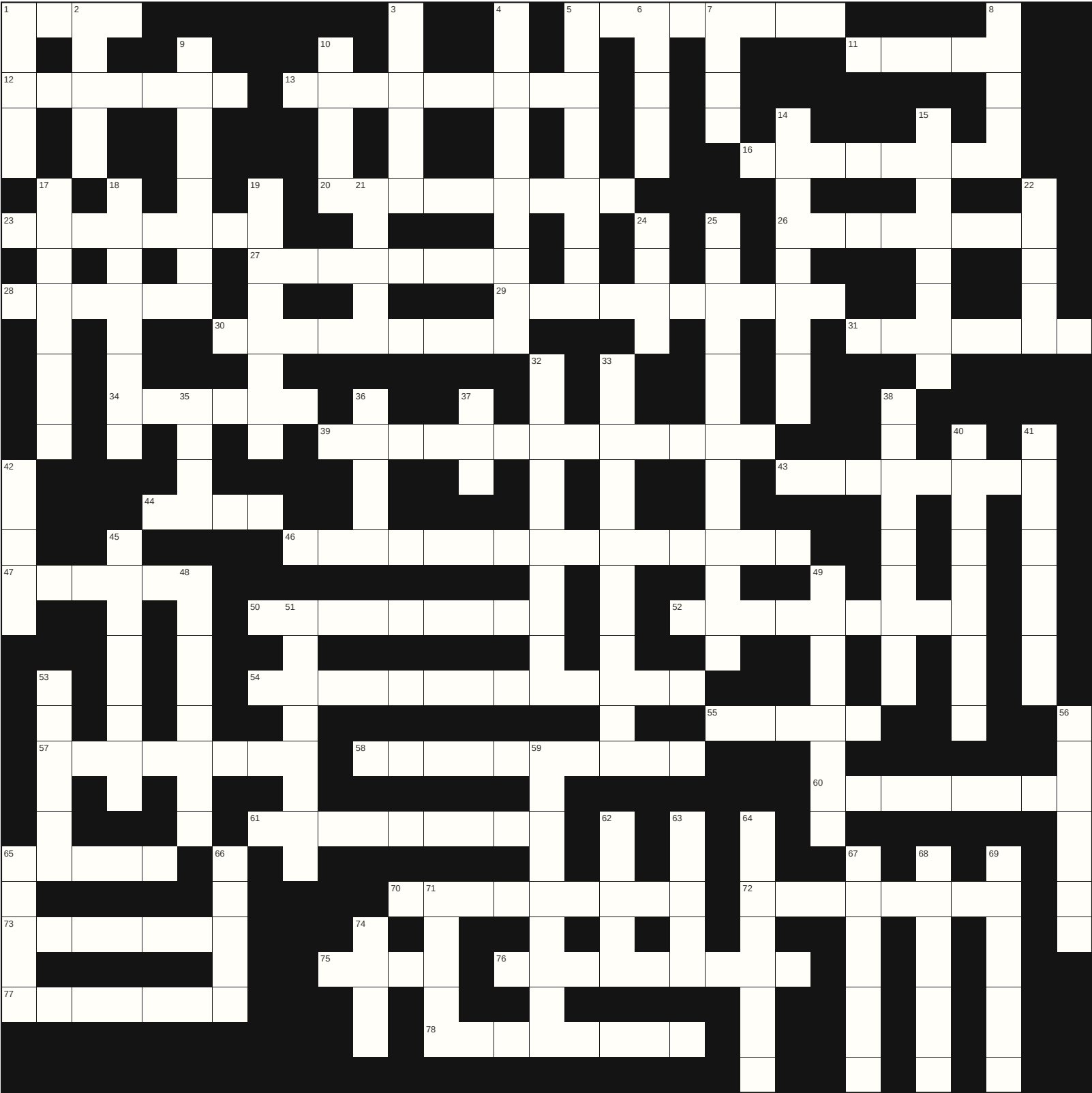
Iwaki FC, from the city in southern Fukushima, have risen quickly through the leagues in the past decade.

In cup football the professional gap between divisions narrows, and midweek ties, when clubs rotate their players, often produce surprises.

Results will be in tomorrow's edition.

CROSSWORD PUZZLE

Today's Professional Puzzle — Constructed by James O'Neill — 81 Words



Solution will appear in tomorrow's edition. Puzzle difficulty: Professional.

ACROSS

1. His twelfth save (4)
5. One of its inventors (8)
11. University whose team found Bert and Ernie (5)
12. No. 27, now extratropical (4-3) (7)
13. Meteor shower this week (9)
16. Hanshin's manager (8)
20. Where No. 27 is heading (9)
23. First Japanese literature laureate (8)
26. Bring it back! (8)
27. Mechanical puppet (8)
28. Laureate of 2015 (6)
29. Corporation that runs Yakiniku King (10)
30. Island of the casino resort (9)
31. Japan's Antarctic pioneer (7)
34. Nagasaki festival opening today (6)
39. Kind of budget, a small second one considered (13)
43. Chemistry laureate of 2025 (8)
44. Okinawa's governor (4)
46. No. 28 passes near it on Friday (15)
47. No. 29, the Little Bear (6)
50. AI developer that bought them (9)
52. Prime minister in August 1996 (9)
54. What AI helps intruders find (13)
55. Plays Hiroshima in the cup (5)
57. Car-sharing service, up to 6.6 million records (5,3) (8)
58. It caught eleven neutrinos in 1987 (10)
60. Card whose chip is to replace photographed IDs (2,6) (8)
61. The only city on the American map without sun (9)
65. Shut out Lotte (5)
70. Warmest city, 29 (9)
72. Laureate born in Nagasaki (8)
73. Its chief executive (7)
75. 'Approaching 2%' (4)
76. Its home city in Aichi (9)
77. 1.6 million images of it may have leaked (7)
78. New name for Paramount and Warner (8)

DOWN

1. Widest range, 13 degrees (5)
2. It flew under five bridges (5)
3. Denso Wave's square (2,4) (6)
4. No. 29 is forecast 550 km east of it (10)
5. State of Halzen's university, and of Rascal (9)
6. Club owned by Red Bull (5)
7. ____ 3 photographed the far side (4)
8. Broker with 220,000 records leaked (5)
9. Festival of eleven floats (8)
10. City of the killing of 2016 (5)
14. Nuclear-powered one proposed (9)
15. Izu Oshima's flower (8)
17. Broker that failed in 1997 (8)
18. ____ King, 10.78 million records (8)
19. Four scoreless innings (8)
21. 506 of them this year, a record (5)
22. The first best picture (5)
24. Japanese cedar (4)
25. What No. 27 becomes this evening (13)
32. Toy still three months away in August 1996 (10)
33. Talks on revising it resume (12)
35. No. 28, weakening (4)
36. Where 2008 TC3 fell (5)
37. Airline founded on October 7, 1919 (3)
38. A pause in operations (5,4) (9)
40. Studio founded in 1912 (9)
41. Change it if you have reused it (8)
42. His seventh win (5)
45. Perennial candidate (8)
48. First at the South Pole (8)
49. City that counted its votes in 67 minutes (8)
51. The ghost particle (8)
53. Cloudy, then sunny (6)
56. Patented on October 7, 1952 (7)
59. Exercise from October 19 (4,5) (9)
62. Hyogo's governor (5)
63. Meets Omiya tonight (5)
64. Fraud by fake message (8)
65. The waves that arrive first (5)
66. His companion (5)
67. Town of the first Level 4 service (7)
68. The suspect's air station (7)
69. Final stage from October 14 (7)
71. Method of sharing out constituencies (5)
74. Neutrino named after a puppet (4)

SPORTS

Seibu Shut Out Lotte 3-0 in Their Last Regular-Season Game; Takeuchi Pitches Four Scoreless Innings and Sato Earns His First Save

By Oliver Brooks | Sports Desk Editor

Seibu ended their regular season with a 3-0 win over Lotte on Tuesday, four days before they open the Climax Series at home.

Natsuki Takeuchi, the left-hander who was the Pacific League's rookie of the year in 2024, pitched four scoreless innings, and So Sato earned the first save of his professional career, Nikkei reports.

A short outing for a leading starter so close to a play-off is a familiar piece of management: enough work to stay sharp, not so much as to tire.

Seibu clinched second place on Monday, which gives them the first stage at home.

Their recovery has been one of the season's best stories. Two years ago they lost 91 games and finished last. They now finish second, with 79 wins, 60 defeats and 4 draws, on the records available.

Their opponents on Saturday are Nippon-Ham, who finished third, at Seibu's domed stadium in Tokorozawa, north-west of Tokyo.

The first stage is the best of three games, played on consecutive days from Saturday. The higher-placed team plays every game at home and goes through if the series is drawn.

The winner goes to Fukuoka to face the champions, SoftBank, who won 91 games. Under a rule introduced this season, a champion that finishes ten or more games clear of its opponent in the final stage starts with two wins in hand, not one, and SoftBank finished more than ten clear of both.

Lotte's season is over.

For Sato, the first save will be a footnote to a season that belonged to others. For a young pitcher it is a start.

SPORTS

Two Domes for the First Stages: Tokyo's Big Egg and Tokorozawa's Roof Over an Open Bowl

By Hana Ito | Research & Archive

Both first-stage series this weekend are played under roofs, though the roofs are very different.

Tokyo Dome opened in March 1988 as Japan's first covered stadium. Its roof is a fabric membrane held up by air pressure, which is why visitors feel a rush of wind through the revolving doors. Its shape gave it its nickname, the Big Egg.

It holds about 43,500 for baseball and is the home of the Yomiuri Giants, the most successful club in Japanese baseball. It also hosts concerts, which keep it busy when the team is away.

Seibu's stadium in Tokorozawa, north-west of Tokyo, opened in 1979 as an open-air ballpark set in a hollow in the hills.

A roof was added in two stages at the end of the 1990s. It sits on the old stands without closing the sides, so that air flows in around its rim.

That design makes it a dome with weather. It is hot in midsummer and cold in spring and late autumn, and spectators at October games come with blankets.

It has carried the name of a sponsor, Belluna, since 2022.

Neither ground is affected by rain, which matters on a weekend when a typhoon is in the Pacific.

Fukuoka's stadium, where SoftBank wait for the Pacific League final, has a roof that opens. It was the first in Japan to do so when it opened in 1993.

Koshien, where Hanshin wait, is open to the sky, and the Central League final stage depends on the weather in Nishinomiya.

SPORTS

The Saitama Derby, and the Drinks Company That Bought Omiya

By Oliver Brooks | Sports Desk Editor

Urawa and Omiya were separate cities until 2001, when they merged with Yono to form Saitama. Their football clubs did not merge.

Urawa Red Diamonds grew from the Mitsubishi Motors team. Their support is the largest in Japanese football, and their stadium, built for the 2002 World Cup, is the biggest football-only ground in the country.

Omiya Ardija grew from the team of NTT, the telecommunications company. They have always been the smaller club, and their supporters have always minded.

Their meetings became known as the Saitama derby, and they have been intense in proportion to the clubs' proximity.

In 2024 Omiya were sold to Red Bull, the Austrian drinks company, which owns clubs in Salzburg, Leipzig and New York and is known for a style of high-pressing football and a policy of developing young players.

It was the first time a foreign company had taken outright ownership of a J.League club. From 2025 the club has played as RB Omiya Ardija.

Red Bull's arrival brought investment and attention to a club that had fallen into the third division and was rebuilding.

Supporters' reactions were mixed. Some welcomed the money and the ambition; others worried about the club's identity, a familiar argument wherever Red Bull has gone.

Its clubs elsewhere have been successful, which encourages those at Omiya who hope to catch up with their neighbours.

Tonight's tie is a measure of how far they have come.

SPORTS

The Emperor's Cup: Japan's Oldest Football Competition, and the Final That Used to Be on New Year's Day

By Hana Ito | Research & Archive

The Emperor's Cup is the oldest competition in Japanese football. It was first held in 1921, decades before the professional J.League, which began in 1993.

It is open to clubs from every level: the professional divisions, university teams and amateur sides that qualify through their prefectural tournaments.

For much of its history it belonged to company teams. Mitsubishi Motors, Yanmar Diesel, Toyo Kogyo and Furukawa Electric, the forerunners of today's Urawa, Cerezo Osaka, Sanfrecce Hiroshima and JEF United, won it repeatedly.

University teams won it too, in the early years. Keio and Waseda were among the champions before the company sides took over.

For decades the final was played on New Year's Day at the National Stadium in Tokyo, a fixture of the holiday as familiar to football supporters as the university relay races on January 2 and 3 were to everyone else.

In recent years the date has moved, to fit a crowded calendar and Japan's participation in international competitions, and the final has been played in the autumn or in December.

The winner earns a place in the AFC Champions League, Asia's club competition, which gives the cup a value beyond the trophy.

Its greatest attraction remains the chance of an upset. Smaller clubs have beaten the professionals, and in 2022 a second-division side, Ventforet Kofu, won the whole competition.

The trophy itself, presented in the name of the Emperor, gives the tournament its name.

Wednesday's three ties continue a competition that has outlasted the company leagues it was born in.

SPORTS

Nippon-Ham, Saturday's Visitors: The Club That Raised Darvish and Ohtani and Moved to a Stadium of Its Own

By Haruto Yamamoto | Sports Reporter

The Hokkaido Nippon-Ham Fighters, who finished third in the Pacific League, travel to Tokorozawa for the first stage of the Climax Series on Saturday.

For much of their history they were a Tokyo club. The food company Nippon Ham bought the team in 1973, and for three decades it shared its home grounds with the Giants, first at Korakuen and then at Tokyo Dome, always in their shadow.

In 2004 the club moved to Sapporo. The gamble worked. Hokkaido, which had never had a professional baseball team of its own, adopted the Fighters with enthusiasm.

They won the Japan Series in 2006, in only their third season there, and again in 2016.

The club became known for developing young players and for letting them leave for the major leagues when they were ready.

Yu Darvish pitched for the Fighters from 2005 to 2011. Shohei Ohtani joined them out of high school in 2013, and it was there, under the manager Hideki Kuriyama, that he was allowed to pitch and bat at the professional level, a combination most of the baseball world thought impossible.

Ohtani left for the Los Angeles Angels in 2018. Kuriyama later managed Japan to victory in the World Baseball Classic of 2023, with Ohtani on the mound for the final out.

In 2023 the Fighters moved again, to Es Con Field Hokkaido, a privately financed stadium with natural grass and a retractable roof in Kitahiroshima, outside Sapporo, built as the centre of a new district of shops

SPORTS

and housing.

On Saturday they must win twice in three days in Tokorozawa, where the higher-placed Seibu go through if the series is level.

The winner earns a trip to Fukuoka and a series that begins two wins down against SoftBank.

SPORTS

Giants v DeNA: The Most Successful Club in Japan Meets the Team Whose Title Changed the Rules

By Oliver Brooks | Sports Desk Editor

The Central League's first stage, at Tokyo Dome from Saturday, pairs the most decorated club in Japanese baseball with the one whose triumph two years ago led to a change in the rules.

The Yomiuri Giants, founded in 1934, have won the Japan Series 22 times, nine of them in succession from 1965 to 1973, when Shigeo Nagashima and Sadaharu Oh batted in the middle of the order. Nagashima died last year.

Their last Japan Series title was in 2012, a long gap by their standards.

They finished second this season with 76 wins, 64 defeats and 3 draws.

The Yokohama DeNA BayStars finished third, at 71-69-3, five games behind.

In 2024 DeNA finished third in the Central League, came through both stages of the Climax Series and beat SoftBank in the Japan Series. It was the club's first national title since 1998.

Their success revived a long-running complaint that the play-offs devalued the pennant race, and the leagues responded with this season's rule giving a second win in hand to champions who finish ten or more games clear.

The rule did not apply in the Central League this year. DeNA's extra-inning win over Hanshin on Sunday ensured they finished within ten games of the champions.

The first stage is the best of three, every game at Tokyo Dome, with the Giants advancing if it is drawn.

The weekend games are played in the afternoon. A third game, if needed, falls on Monday, Sports Day.

SPORTS

A Second Chance by Draft: How Otake Came to Hanshin, and Why the League Invented a Market for Spare Players

By Haruto Yamamoto | Sports Reporter

Kotaro Otake, who won his seventh game on Tuesday, is one of the great successes of a scheme that is only four years old.

Japanese baseball long had a problem of surplus. Talented players sat for years in the farm teams of strong clubs, blocked by stars, while weaker clubs could have used them.

Free agency, which Japan introduced in 1993, helps only players with many years of service. Trades between clubs are less common than in the United States.

In December 2022 the professional league held the first active players' draft. Each of the twelve clubs puts forward at least two players from its roster, and each takes at least one from the others.

The idea was simple: to move players who were not getting chances to clubs that would give them some.

It worked at once. Otake, a left-hander who had found few opportunities at SoftBank, moved to Hanshin and won twelve games in 2023, the year Hanshin won the Japan Series.

In the same draft the outfielder Seiya Hosokawa moved from DeNA to Chunichi and hit 24 home runs that season, after years in the minor leagues.

Not every player moved has flourished, and clubs have been accused of offering players they were glad to lose. But the scheme has become a fixture of the December calendar.

For Otake the move has been the making of a career. He is now a regular in the rotation of the Central League champions.

His seventh win on Tuesday came in a 2-1 game, the kind of tight contest the play-offs will bring.

SPORTS

The Sports Day Weekend: Play-Offs, a Relay Race in Izumo and the Last Day in Baku

By Oliver Brooks | Sports Desk Editor

Monday is Sports Day, and the three days that end with it are full.

BASEBALL: The Climax Series first stages begin on Saturday: the Giants against DeNA at Tokyo Dome and Seibu against Nippon-Ham in Tokorozawa. Weekend games are played in the daytime. Any third games fall on Monday.

ATHLETICS: The Izumo relay, the first of the season's three major university road relays, is run on Sports Day in Izumo, Shimane Prefecture, over six stages. It is followed by the national university relay in November and the Hakone relay in January.

JUDO: The world championships in Baku end on Sunday with the mixed team event, in which Japan's men and women compete together. After the first two days Japan had three gold medals and two bronze.

FOOTBALL: The Emperor's Cup ties are played tonight.

PARA SPORT: The Asian Para Games open in Aichi and Nagoya on October 18, a week after the holiday.

The holiday itself remembers the opening of the Tokyo Olympics on October 10, 1964. It was moved to the second Monday of October in 2000 and renamed Sports Day in 2020.

Schools and neighbourhoods hold their sports days around it, and many local governments open their gymnasiums and pools free.

The weather on land is expected to be mostly fine. At the coast, swell from Typhoon No. 29 will make the sea dangerous for swimmers and anglers.

For anyone heading to the domes, the trains will be busier than usual, with the holiday traffic.

SPORTS

Scoreboard

By the Sports Desk

CENTRAL LEAGUE, TUESDAY: Hanshin 2, Hiroshima 1. W: Otake (7). S: Kudo (12).

PACIFIC LEAGUE, TUESDAY: Seibu 3, Lotte 0. Takeuchi four scoreless innings. S: So Sato (1).

PACIFIC LEAGUE FINAL STANDINGS: 1 SoftBank 91-49-3; 2 Seibu; 3 Nippon-Ham.

CENTRAL LEAGUE: 1 Hanshin; 2 Giants 76-64-3; 3 DeNA 71-69-3.

CLIMAX SERIES: First stages Saturday, October 10. Central final stage at Koshien from October 14.

EMPEROR'S CUP, TONIGHT: Urawa v Omiya; Cerezo Osaka v Kagoshima United; Sanfrecce Hiroshima v Iwaki FC.

KIRIN CUP FINAL, MONDAY: Japan 2, New Zealand 1.

WORLD JUDO, BAKU: Japan three gold and two bronze after two days. Mixed team event Sunday.

IZUMO RELAY: Monday, Sports Day.

ASIAN PARA GAMES: Aichi and Nagoya, October 18 to 24.

CULTURE

Nagasaki Kunchi Opens Today: Three Days of Dragons, Ships and Shouts of 'Mottekoi'

By Naomi Kato | Culture & Society Editor

The Kunchi, the autumn festival of Suwa Shrine in Nagasaki, begins today and runs until Friday. It is held on the same three days every year.

The festival dates from 1634, when two women of the city performed a dance before the shrine. It has grown into one of the great festivals of Kyushu.

Its centrepiece is the dedication of dances by the city's neighbourhoods. Each year a group of districts takes its turn, and each district's turn comes round only once every seven years, so that its performers prepare for years.

The performances reflect the city's history as Japan's window on the world during the centuries of seclusion, when Dutch and Chinese traders were permitted there and nowhere else.

The dragon dance, in which a long dragon chases a golden ball, came from the Chinese community. Model ships, some pulled and spun at speed by teams

of men, recall the trade that made the city rich.

The crowd's part is to shout. When a performance ends, spectators call 'Mottekoi', meaning bring it back, and the performers return for an encore. Some troupes are called back repeatedly.

The festival is designated an important intangible folk cultural property of the nation.

Seats for the main performances at the shrine and at the venues in the city are allocated by lottery and sell out long in advance.

The festival's districts also carry their performances through the streets, visiting businesses and homes, which is the chance for most people to see them free.

The weather for Nagasaki should be kind; Wednesday's map shows sunshine over most of Kyushu, with 25 degrees in Fukuoka.

CULTURE

Takayama's Autumn Festival on Friday and Saturday: Eleven Floats and a Puppet That Swings

By Naomi Kato | Culture & Society Editor

Takayama, in the mountains of Gifu Prefecture, holds its autumn festival on Friday and Saturday, October 9 and 10.

The festival belongs to Sakurayama Hachiman Shrine in the northern part of the old town. Its spring counterpart, at another shrine in the south, is held in April.

Its glory is its floats, called yatai. Eleven of them are brought out for the autumn festival, towering wooden carriages decorated with carving, lacquer, metalwork and embroidery made by the town's craftsmen from the eighteenth and nineteenth centuries.

Takayama's carpenters were famous; for centuries the region sent them to work on temples and palaces in Kyoto and Nara.

One float carries karakuri, mechanical puppets operated by strings from inside, which perform on its upper stage. The best-known act shows a puppet moving from one figure to another in a sequence that has delighted audiences for generations.

In the evening the floats are lit with lanterns and paraded through the narrow streets of merchant houses.

In 2016 the Takayama festival was inscribed by UNESCO, together with 32 other float festivals in Japan, as an intangible cultural heritage of humanity.

The town's population is small and its visitors many. Hotels for the festival weekend are usually booked months ahead.

Takayama is about two and a half hours from Nagoya by limited express train.

The festival falls on the eve of the Sports Day weekend this year, which will make the town busier still.

CULTURE

Literature Tomorrow: Two Japanese Laureates, a Third Born in Nagasaki, and a Perennial Candidate

By Naomi Kato | Culture & Society Editor

The Nobel Prize in Literature is announced in Stockholm on Thursday at eight in the evening, Japan time.

Two Japanese writers have won it. Yasunari Kawabata was the first, in 1968, cited for narrative mastery that expressed the essence of the Japanese mind. Kenzaburo Oe followed in 1994.

A third laureate was born in Japan. Kazuo Ishiguro, who won in 2017, was born in Nagasaki in 1954 and moved to England with his family at the age of five. He writes in English and is a British citizen, but his first two novels were set in Japan.

The city of his birth is celebrating its Kunchi festival this week.

Each October one name is mentioned in Japan more than any other: Haruki Murakami, whose novels have been translated into dozens of languages. Bookshops have prepared displays in anticipation for years, and fans have gathered to wait for the announcement.

The committee does not publish a shortlist, and its choices have often surprised the world. Bookmakers' odds are a guide to popularity, not to the decision.

Other Japanese writers are read widely abroad. Yoko Tawada, who writes in Japanese and German, won

the American National Book Award for translated literature in 2018.

Last year's prize went to the Hungarian novelist Laszlo Krasznahorkai. The year before, Han Kang of South Korea became the first Asian woman to win it.

Whatever happens, the announcement is a fixture of the Japanese autumn, and of the evening news.

The peace prize follows on Friday.

CULTURE

Shirase, Showa and Two Dogs Named Taro and Jiro: Japan's Long Road to the Antarctic

By Hana Ito | Research & Archive

The IceCube observatory sits at the South Pole, which a Norwegian reached first and a Briton second, a few weeks apart, in the southern summer of 1911 and 1912.

A Japanese expedition was in the Antarctic at the same time.

Nobu Shirase, an army lieutenant, sailed south in a small wooden ship, the Kainan Maru, in 1910. Underfunded and underequipped, his party could not hope to reach the pole. In January 1912 it reached about 80 degrees south on the ice shelf and named the area Yamato Yukihara, the Snow Plain of Japan.

His achievement was recognised slowly at home and more generously abroad. A glacier on the Antarctic coast is named after him, and so is the ice-breaker that now carries Japan's expeditions south.

Japan returned in the International Geophysical Year of 1957, when it established Showa Station on an island off the coast of East Antarctica. Its research has continued there ever since.

The station's early history produced the most famous story in Japanese polar exploration. In 1958 bad weather forced the expedition to leave without the sled dogs, who were left chained at the base.

When the next party arrived a year later, two of them, the brothers Taro and Jiro, were alive. The story was told in a film, Antarctica, in 1983, which was one of the most successful Japanese films ever made.

Japanese scientists at Showa have made important discoveries, among them some of the first measurements of the ozone hole in the early 1980s, and large finds of meteorites on the ice.

Japan's expeditions depart each November, by ship, for the southern summer.

Chiba University's work on IceCube, at the other end of the continent, belongs to the same tradition of scientists willing to go a very long way for their data.

CULTURE

Life at the Bottom of the World: The Station Where IceCube's Computers Hum Through Six Months of Night

By Maya Suzuki | Science & Innovation Desk

The Amundsen-Scott South Pole Station stands within a few hundred metres of the geographic pole, on ice about 2,800 metres thick, at an altitude that makes visitors breathless.

It is named after the two men who first reached the pole: Roald Amundsen of Norway, on December 14, 1911, and Robert Falcon Scott of Britain, on January 17, 1912. Scott and his companions died on the return journey.

The United States built the first station there in 1956 and 1957. The present building, raised on columns so that drifting snow passes beneath it, opened in 2008.

The Sun rises once a year, in September, and sets once, in March. The winter is six months of darkness, with temperatures that fall below minus 60 degrees.

In summer, from November to February, aircraft arrive with scientists, builders and supplies, and the population rises to well over a hundred. In winter it falls to a few dozen, who cannot leave until spring.

IceCube's computers sit in a laboratory near the station. Two or three people stay through each winter to look after them, among the most isolated jobs in science.

The station also hosts telescopes that study the oldest light in the universe, taking advantage of the cold, dry and stable air.

Food is mostly frozen or tinned by midwinter, and a greenhouse supplies fresh vegetables. Residents mark midwinter's day, in June, with a feast.

CULTURE

The geographic pole itself moves with the ice, about ten metres a year, and is re-marked with a new marker every New Year's Day.

Tuesday's prize was announced in the southern spring. The first flights of the new season will soon arrive.

CULTURE

Rascal: The Gentle Cartoon of 1977 Behind Japan's Raccoon Problem

By Naomi Kato | Culture & Society Editor

Every raccoon in Japan, including the one in a tree at Kawasaki Station, owes something to a children's cartoon.

In 1977 Nippon Animation broadcast Araiguma Rasukaru, Rascal the Raccoon, as part of its World Masterpiece Theater, the Sunday evening series that adapted classic stories for television.

It was based on Rascal, a memoir by the American writer Sterling North of a year in his boyhood in Edgerton, Wisconsin, around 1918, when he raised a raccoon kit as a pet. The book was published in 1963 and was a children's classic in the United States.

The story ends with the boy releasing the raccoon into the wild, because it cannot live with people.

Japanese viewers took the opposite lesson. The series was a great success, and raccoons were imported from North America as pets in large numbers.

Raccoons are endearing as cubs and very difficult as adults. They are strong, curious and destructive, and they bite. Owners abandoned them or lost them, and they found Japan much to their liking.

Within a few decades they were established in the wild in much of the country, damaging crops, raiding houses and nesting in the roofs of temples.

In 2005 the raccoon was among the first species designated under the new law on invasive alien species, and keeping or releasing one became illegal without permission.

The cartoon remains fondly remembered. By coincidence, Wisconsin is also the home of this year's Nobel laureate in physics.

North's book, read to its end, makes the case the law now makes: a wild animal belongs in the wild, and in its own country.

CULTURE

Atami: A Shogun's Hot Spring, a Famous Kick on the Beach, and a Town That Came Back

By Grace Park | Food & Restaurants

Atami, whose ferries and visitors were kept away this week by the swell from Typhoon No. 27, is one of the oldest resort towns in Japan.

Its hot springs drew Tokugawa Ieyasu, the first Tokugawa shogun, in the early seventeenth century. His successors had its water carried to Edo in barrels for their baths.

The town's literary fame came from a novel. In The Golden Demon, Konjiki Yasha, serialised by Ozaki Koyo from 1897, the student Kan'ichi confronts his fiancée Omiya on the beach at Atami after she has chosen a rich man over him, and kicks her to the sand.

The scene was among the best known in Japanese popular culture for half a century. A statue of the pair stands on the seafront, though a kick is no longer thought a fit subject for celebration.

In the years of rapid growth after the war, Atami was the place for honeymoons and company outings, an hour from Tokyo by train after the bullet train arrived in 1964.

Its large hotels declined with the habits that filled them, and for a time the town seemed a relic.

In the past decade it has recovered, with small hotels, cafes and a younger crowd of visitors from Tokyo, some of whom have moved there to work remotely.

Its specialities are the produce of the sea and the hills: dried fish, citrus and sweets sold in the shopping streets that climb from the station.

From Atami, boats sail to the small island of Hatsushima, and services run to Izu Oshima. When the sea is rough, as this week, they stay in port.

The town's fireworks displays over the bay, held through the year, are among its best-loved attractions.

CULTURE

Izu Oshima: A Volcano, Its Camellias and an Island That Left Overnight in 1986

By Naomi Kato | Culture & Society Editor

Izu Oshima, the island whose ferries from Ito were cancelled this week, lies about 120 kilometres south of Tokyo and is the largest of the Izu Islands. It is part of Tokyo Metropolis.

It is a volcano. Mount Mihara, at its centre, has erupted many times in recorded history.

In November 1986 a fissure opened on its slopes and lava flowed towards the island's main town. On the night of November 21 the entire population, about 10,000 people, was evacuated by sea within hours. They returned about a month later.

The evacuation is still studied as an example of how to empty a community quickly and safely.

The island is also known for camellias. The trees grow all over it, many planted as windbreaks around fields and houses, and the oil pressed from their seeds has been used for centuries in cooking and for the hair.

A camellia festival is held from late January to March, when the trees flower.

The island has known disaster from water as well as fire. In October 2013 a typhoon brought record rain, and a landslide in the town of Motomachi killed more than 30 people.

Its links with the mainland are ferries and jetfoils from Tokyo, Atami and Ito, and a short flight from Chofu.

Visitors come for the volcano walks across a black desert of ash, the fishing and diving, and the slower pace of island life within reach of the capital.

When the sea is rough, the island waits. This week it waited for the swell of a typhoon that passed hundreds of kilometres away.

CULTURE

Two Studios, a Century Each: From Wings and The Jazz Singer to The Last Samurai and Godzilla

By Naomi Kato | Culture & Society Editor

The company that now owns both Paramount and Warner Bros. holds two of the great libraries of American film.

Paramount traces its history to 1912 and is the oldest surviving film studio in Hollywood. It won the first Academy Award for best picture, for Wings, a film about pilots in the First World War.

Its library includes The Godfather, Chinatown and the Indiana Jones films, and, more recently, Top Gun: Maverick.

Warner Bros. was founded in 1923 by four brothers, Harry, Albert, Sam and Jack Warner. Four years later it released The Jazz Singer, the first feature film with synchronised dialogue, which this page's technology history recalled on Tuesday.

The Warner library is if anything richer: Casablanca, the films of Clint Eastwood and Stanley Kubrick, the Harry Potter series and the films of DC Comics.

Both studios have Japanese chapters in their histories. Warner Bros. released The Last Samurai in 2003, with Ken Watanabe in the role that made him an international star, and Clint Eastwood's Letters From Iwo Jima, told from the Japanese side, in 2006.

Warner also released the American Godzilla films of recent years, made under licence from Toho, the Japanese studio that owns the monster.

Paramount's Transformers films were based on toys created by the Japanese company Takara.

The new owner, Skydance, will decide what becomes of the two studios' production and distribution.

The libraries, at least, will survive any reorganisation. Films made a century ago are still among their owners' most valuable assets.

CULTURE

Kaguya: The Princess Who Went Home to the Moon, and the Spacecraft Named After Her

By Naomi Kato | Culture & Society Editor

Long before any spacecraft photographed the Moon, Japan had a story about someone who came from it.

The Tale of the Bamboo Cutter is the oldest surviving

prose narrative in Japanese, written down around the turn of the tenth century. The Tale of Genji calls it the ancestor of all tales.

An old man who cuts bamboo finds a tiny girl inside a glowing stalk. He and his wife raise her, and she grows into a woman of extraordinary beauty, Princess Kaguya.

Suitors come, and she sets each an impossible task: to bring the Buddha's stone begging bowl, a branch from a jewelled tree, the robe of a fire-rat. They fail, or cheat and are found out. Even the Emperor cannot win her.

At last she reveals that she is from the Moon and must return. On a night of full moon, beings come from the sky to fetch her, and the guards the Emperor has sent cannot lift their bows.

She leaves the Emperor a letter and an elixir of immortality. Grieving, he has them burned on the mountain nearest heaven, and the smoke, the story says, still rises from Fuji.

The story has been retold in every medium. Isao Takahata's animated film The Tale of the Princess Kaguya, released by Studio Ghibli in 2013, was nominated for an Academy Award.

When Japan sent a large orbiter to the Moon in 2007, the public chose its nickname: Kaguya.

The spacecraft mapped the Moon's surface and gravity, the far side included, and its high-definition cameras filmed the Earth rising over the lunar horizon. It ended its mission in 2009 by striking the surface, as planned.

Luna 3's first grainy pictures of the far side were taken sixty-seven years ago today. The princess, by the old story's reckoning, had gone home long before.

CULTURE

The Sea of Moscow and the Sea of Dreams: How the Far Side of the Moon Got Its Names

By Hana Ito | Research & Archive

Whoever sees a place first usually gets to name it, and the far side of the Moon was first seen by the Soviet Union.

From the photographs taken by Luna 3 in October 1959, the Soviet Academy of Sciences identified and named the most prominent features it could make out.

A dark plain became Mare Moscoviense, the Sea of Moscow. Large craters were named after Konstantin Tsiolkovsky, the pioneer of rocketry, after the scientist Mikhail Lomonosov, after Jules Verne, who had sent fictional travellers round the Moon, and after the French physicist Frederic Joliot-Curie.

Some names did not survive closer inspection. A feature named the Sea of Dreams turned out, in better pictures, not to be a single dark plain at all, and the name was dropped. The Soviet Mountains proved to be a streak of bright material, not a range.

The International Astronomical Union, which has the final word on names in space, accepted many of the Soviet names in 1961.

Better maps came from American and Soviet spacecraft in the 1960s, and in 1970 the union approved a large number of new names for the far side, chosen to honour scientists from many countries.

Japanese scientists are among them. Craters on the far side bear the names of the physicists Hantaro Nagaoka, who proposed an early model of the atom, and Yoshio Nishina, a founder of modern physics in Japan.

Names on the Moon are given only to the dead, and only to people who made a lasting contribution to science or exploration, with a few exceptions for features named after places and ideas.

The far side remains the less visited half. China's Chang'e 4 made the first landing there in 2019, and Chang'e 6 brought back the first samples in 2024.

Its names are a record of who looked first, and who looked more closely afterwards.

CULTURE

1634: The Year Nagasaki Began Its Festival and Began Building an Island for Foreigners

By Hana Ito | Research & Archive

The Kunchi festival was first held in 1634. In the same year Nagasaki began building Dejima.

It was a small, fan-shaped artificial island in the harbour, joined to the town by a single bridge, built to confine Portuguese traders.

The Portuguese were expelled in 1639. Two years later the Dutch East India Company was ordered to move its trading post there from Hirado.

For more than two centuries Dejima was the only place in Japan where Europeans were allowed to trade and live. Chinese merchants, for their part, were housed from the 1680s in a walled quarter of their own in the town.

Through the island came goods and, more importantly, books: on medicine, anatomy, astronomy and the other sciences that Japanese scholars studied as Dutch learning.

Philipp Franz von Siebold, a German doctor at the post in the 1820s, taught Japanese students medicine before he was expelled over the maps he tried to take home.

When the country opened its ports in the 1850s the island lost its purpose, and land reclamation later swallowed it into the city.

The site was designated a national historic site in 1922.

Nagasaki has spent decades rebuilding it. Warehouses and residences have been reconstructed, and in 2017 a bridge was again built across to the island.

Visitors today walk streets laid out on the old plan and can see a scale model of the island as it stood in the early nineteenth century.

The festival's dragon dances and model ships recall the same history. Both began in the city's years as Japan's window on the world.

CULTURE

The Draconids on Thursday Evening: A Modest Meteor Shower With a History of Surprises, and a Dark Sky This Year

By Maya Suzuki | Science & Innovation Desk

The Draconid meteor shower reaches its peak around October 8 and 9, which this year means Thursday and Friday evenings.

Its meteors are fragments shed by a comet, 21P/Giacobini-Zinner, which orbits the Sun every six and a half years. When the Earth passes through the comet's trail of dust, the particles burn up in the atmosphere as shooting stars.

In most years the Draconids are a modest display, a few meteors an hour at best.

But they have a history of surprises. In 1933 and again in 1946, when the Earth passed through dense clumps of debris, observers in Europe saw thousands of meteors an hour, a true meteor storm.

Smaller outbursts have been recorded since, and astronomers watch the shower each year for signs of another.

Unusually for a meteor shower, the Draconids are best seen in the evening, not before dawn, because their radiant, the point in the constellation Draco from which they appear to come, stands highest in the northern sky after dark.

This year the Moon will not interfere. It is a thin waning crescent that rises only in the small hours, and new moon falls at the weekend.

The best views are away from city lights, with a wide view of the northern sky. No telescope is needed; the eyes take about twenty minutes to adjust to the dark.

Wednesday's map shows fine weather over most of the country, and if it lasts the conditions for watching should be good.

The comet behind them has a double name because it was found twice: by Michel Giacobini in Nice in 1900, and again by Ernst Zinner in Bamberg in 1913. It last swung closest to the Sun in 2025.

In 1985 an American spacecraft, the International Cometary Explorer, flew through the comet's tail, the first encounter between a spacecraft and a comet. Japan's first probes beyond the Earth, Sakigake and Suisei, flew past Halley's comet the following year.

The meteors are slow, entering the atmosphere at about 20 kilometres a second, which makes them easier to see. Patience is the main requirement.

Warm clothes are the only other equipment needed.

EDITORIAL & OPINION



Editorial cartoon by Taro Suzuki for The Japan Morning Post.

EDITORIAL

The Files Walked Out. The Allies Are Bolting the Gate.

A record year of leaks has shown how easily the papers that prove who we are can be carried out of the gate. A stronger lock, held by Japan and its ally together, is welcome. It will be worth having only if the companies and the agencies that keep our files learn to turn the key themselves.

By Samantha Ortiz | Editorial Page Editor

Taro Suzuki's drawing today is of a gate. It is an old Japanese gate, with a tiled roof and heavy timber doors standing open, and the sign across its lintel reads ID papers out.

Crouched in the gateway is a figure in a black hood with the words The leak across his forehead. He is in no hurry. Around him are stacks of files, bound with string and labelled like parcels: Times Car, with a tag reading 6.6 million; Yakiniku King; Dai-ichi Life; and Digital Agency, with a tag that reads Personnel files.

At his feet lies a padlock, its chain snapped, in a scatter of broken pieces.

On the right of the picture, under a sign that reads Japan locks it, and beneath the flags of Japan and the United States, two men are holding a new padlock between them, a great block of steel lettered Allied watch. One is a Japanese official in a dark suit and spectacles. The other is an American general.

The caption reads: The files walked out. The allies are bolting the gate.

It is a fair picture of the morning, and an uncomfortable one, because the most important thing in it is the order of events.

What is known

The Yomiuri Shimbun reports on its front page today that leaks of personal information in Japan have reached 506 cases so far this year, a record, according to a count by a security company. Among the methods behind them is one that would have sounded like fiction a few years ago: intruders using artificial intelligence to search for vulnerabilities in the systems they attack.

The individual cases are large. Nikkei reports that about 10.78 million records were taken through unauthorised access to the app of Yakiniku King, the grilled-meat chain: names, telephone numbers and e-mail addresses. Daiwa Securities has had about 220,000 records leaked, the Sankei Shimbun reports. And at Times Car, the car-sharing service, up to

about 6.6 million records may have been exposed, among them some 1.6 million images of driving licences.

Mr Suzuki's other two bundles carry the names of a life insurer and of the Digital Agency, the department created to lead the country's digital government. His point does not depend on any single case. It is that the files of a restaurant chain, a financial company and the state all leave by the same gate, and that the gate is labelled with what matters most: the papers that prove who we are.

ID papers out

The label on the lintel is the sharpest thing in the drawing.

A name and a telephone number are a nuisance in a criminal's hands. A driving licence is something else. It carries a photograph, an address and a date of birth, and in Japan it is the document most widely accepted as proof that a person is who he says he is.

Since 2018 banks, brokers, telephone companies and payment services have been allowed to open accounts online by asking customers to photograph an identity document and send the picture, often with a photograph of their own face. The method was adopted for convenience, and it works. It also means that a clear image of someone else's licence is a key to his identity.

The government has recognised the weakness and decided to phase out checks that rely on photographed documents in favour of reading the chip in the My Number card, which cannot be copied by taking a picture of it. That decision was right, and it should be carried out faster than planned. Every month in which a photographed licence still opens a bank account is a month in which 1.6 million exposed images are worth stealing.

The My Number card, for all the difficulties of its introduction, is better suited to the task. Reading its chip proves that the genuine card is in the holder's hands, and a picture of it is worth nothing.

There is a simpler lesson too. Times Car needs to know that its members are entitled to drive. Whether it needs to keep a picture of every licence, for years, after the check has been made is another question. A company cannot lose what it does not hold.

The broken lock

The padlock at the hooded man's feet is the part of the drawing companies should study.

It was not picked. It was broken, and the pieces lie where anyone can see them. That is how most of this year's cases look from outside: not ingenious burglaries but the predictable failure of defences that were known to be weak, left unrepaired, or never properly fitted.

The arrival of AI makes that failure more expensive. A flaw in a company's software used to sit for weeks or months before anyone found it, and the company's hope was that the defenders would find it first. Machines that read code quickly have shortened that interval for everyone. In June the international association of security response teams raised its forecast of the vulnerabilities to be catalogued this year to 66,000.

The tools cut both ways, and the defenders' version of them is just as available. A company that patches its systems slowly, or keeps old software running because replacing it is inconvenient, is now competing against attackers who do not tire.

Companies that decline to use the new defensive tools on grounds of cost will find that the attackers have not been so economical.

Nor is the threat only criminal. Last November Anthropic, the American AI developer, reported that it had detected and disrupted a campaign by a group it judged to be sponsored by the Chinese state, which had used its tools to carry out much of an intrusion operation against about thirty organisations with little human direction. The same techniques that empty a restaurant chain's database can be turned on a ministry, a defence contractor or a port.

The hands on the new lock

On the right of the picture are the officials, and here the news is better.

The laws on active cyber defence took effect on October 1. For the first time the Japanese authorities may, with the approval of an independent

commission, enter the servers being used to attack the country's networks and render them harmless; in the most serious cases the Self-Defense Forces may do so. The analysis of communications information that the laws also allow begins next autumn.

When the laws took effect the prime minister said that the threat could not be met by the government, the private sector or any one country alone. She was right on all three counts, and the cartoonist has drawn two of them.

The alliance has already been tested by this problem. American newspapers reported three years ago that Chinese military hackers had penetrated Japan's classified defence networks, and American officials made plain that deeper sharing of intelligence depended on Japan's ability to keep secrets. The security clearance system that took effect last year, and the new cyber laws, are Japan's answer. They are what make the American general in the drawing willing to hold the lock at all.

Co-operation is not only with Washington. This month a core member of the Qilin ransomware group, the gang behind the attack that stopped the shipments of Asahi Group last year, was detained in Osaka and handed over to Germany. A criminal who could not have been touched while he sat at home was caught on holiday in a country whose police and courts work with their allies.

That is what an alliance watch looks like when it works: information shared, borders that do not shelter criminals, and the power to reach the servers from which attacks are launched.

The long arm of the law, in this field, is made of other countries' arms. Japan's must be available to its partners in return.

Japan locks it

But read the sign above the two men. It does not say America locks it. It says Japan locks it.

That is the right order, and it should be taken literally. An alliance is not a security service for hire. The United States will share what it knows and help where it can. It will not patch a broker's servers, delete a car-sharing company's old licence images or train a restaurant chain's engineers. Those are Japanese jobs, done by Japanese companies, answerable to Japanese law.

EDITORIAL & OPINION

A country that wishes to be trusted with its ally's secrets must first be seen to keep its own citizens' files. Every large leak is noticed in Washington as well as in Tokyo.

There is also a matter of national dignity. Japan spent decades building a reputation for care and precision in manufacturing. It has not yet built the same reputation for care with information, and this year's record suggests that it is moving in the wrong direction.

The country's manufacturers learned long ago that quality was not the job of an inspector at the end of the line but of everyone on it. Information security is the same. It cannot be added at the end by a specialist; it has to be built into every system and every habit.

What the law asks, and does not

Since April 2022 a company that suffers a serious leak must report it to the Personal Information Protection Commission and tell the people affected. That reform was overdue and has worked as intended: leaks that would once have stayed quiet are now announced.

What the law does not do is make negligence expensive. The commission can give guidance and issue orders, and a company that defies an order faces criminal penalties, which for a corporation can reach 100 million yen. It cannot impose administrative fines calculated on a company's turnover, as European regulators can. The idea has been discussed in the law's periodic reviews and has not been adopted.

A hundred million yen, after the event and only for disobedience, is not a figure that changes the priorities of a board of directors. A penalty proportionate to the size of the company and the seriousness of the failure would.

Japan has long preferred guidance to punishment, and for many purposes the preference has served it well. It serves poorly here. The people whose details are taken did not consent to the risk, cannot see the company's defences and cannot move their records elsewhere once they are gone.

The state's own files

The fourth bundle in the drawing carries the name of the Digital Agency, and it is the one that should most concern the government.

The agency was created in 2021 to drag the state's systems into the present: to replace paper and fax, to connect the records of ministries and municipalities, and to make the My Number card the key to public services. It has had real successes. It is also the institution on which every citizen's digital identity will increasingly depend.

The same is true of every ministry and local government that keeps records of taxpayers, patients, pensioners and public servants. A state that asks its citizens to trust it with their identity must hold itself to a higher standard than it asks of a restaurant chain.

The new powers of active cyber defence are aimed outward, at the attackers. The government should also look inward, at its own systems, with the same seriousness: regular independent testing, public reporting of the results, and the replacement of old software that cannot be defended.

A record that understates

Five hundred and six is a count of incidents, not of people. A single case can contain millions of records, as Yakiniiku King's does, and a single person can appear in a dozen cases without ever learning it.

Nor is the problem new. In 2014 an employee of a contractor working for Benesse, the education company, copied the details of tens of millions of customers and sold them to list brokers. In 2015 the Japan Pension Service lost the records of 1.25 million people after staff opened a malicious e-mail. In 2023 NTT West disclosed that a former temporary worker at a subsidiary had taken the details of about nine million customers over a decade.

Each case produced apologies, reports and promises. Each was followed by larger ones.

What has changed is the speed and the scale. The thief of 2014 needed an insider with a memory stick. The thief of 2026 needs a flaw, a machine to find it and an internet connection.

Some of this year's rise reflects better reporting under the rules that took effect in 2022. That is a reason to welcome the count, not to discount it.

Who pays

The people whose details are taken bear most of the cost: the time spent changing passwords and watching statements, the anxiety, and in the worst cases the money lost to frauds that their stolen information made possible.

Companies that suffer leaks apologise, and some offer a small gift voucher. Courts have accepted that a leak can cause distress deserving compensation, but the sums awarded have been small.

That arithmetic is wrong. If a leak costs a company little and its customers much, the company will spend too little on preventing it, and nobody should be surprised when it happens again.

The treaty and the network

The alliance has already said how seriously it takes the subject. In 2019 the foreign and defence ministers of the two countries agreed that a cyber-attack could, in certain circumstances, constitute an armed attack under the security treaty.

That commitment means something only if Japan can see an attack, attribute it and respond. The new laws give it some of the means. The Self-Defense Forces' cyber units, brought together under a single command in 2022, are being expanded.

Deterrence works when the other side believes in it. Japan's adversaries will judge the alliance's cyber commitment by what happens after the next serious attack, not by the communique.

The boardroom

Security is still treated in many Japanese companies as a technical matter for the systems department. It is a question for the board.

The economy ministry's guidelines on cyber security management say as much: directors are responsible for identifying the risks, for providing the resources to meet them and for the company's response when something goes wrong.

A director who would never allow the company's cash to be left in an unlocked drawer should ask how its customers' identities are stored, who can reach them, and when the systems that hold them were last tested by someone paid to break in.

Small and medium-sized companies, which often lack specialist staff, are the weakest links in many supply chains. Several large breaches in recent years began at a subcontractor, and the large companies that depend on them share the responsibility for their defences.

What should be done

The drawing's caption is a little rueful. The files walked out; only then were the allies bolting the gate. The point is not that the new lock is useless. It is that the next files are still inside, and the lock should be fitted before they go.

Six things would help.

First, speed up the end of identity checks based on photographed documents. The government has decided to move to the chip in the My Number card. It should set the earliest practicable date, and hold to it.

The change will inconvenience customers used to sending a photograph from a smartphone. It will inconvenience criminals more.

Second, make companies hold less. No business should keep images of identity documents, or any personal data, longer than its purpose requires. The law already asks companies to delete data they no longer need, but only as a duty to try; it should say so with deadlines and audits.

Data that a company does not need is not an asset. It is a liability waiting for an intruder.

Third, give the Personal Information Protection Commission power to impose fines that companies will notice, scaled to their turnover and to the seriousness of the failure, and reserve the heaviest for those that ignored warnings or left known flaws unrepaired.

Fines are not an end in themselves. Their purpose is to make the quiet calculation in the boardroom come out the right way before the breach, not after it.

Fourth, require that the cause of a serious leak be published once it is known. The people affected deserve to know how their records were taken, and other companies can learn from it only if they are told. A list of numbers teaches nothing.

The habit of announcing the number of records and

the apology, and saying little about how the intruder got in, protects reputations at the expense of everyone else's security.

Fifth, put the National Cyber Office's knowledge to work for business. The new laws oblige the operators of critical infrastructure to share information with the government. The flow should run the other way as well, so that a medium-sized company learns of a technique being used against others before it is used against it.

Small companies cannot afford their own intelligence service. The state now has one for cyber matters, and it should share what it learns.

Sixth, hold the state to the standard it sets. The ministries and the Digital Agency should be the first to show that they can keep what they collect.

A government that asks every citizen to carry his identity on a chip must show that its own house is in order.

The order of events

None of this requires Japan to stand alone, and none of it should be read as a complaint about the alliance. The two men in the drawing are holding the lock together, and that is how it should be. The United States has the larger capability; Japan has the networks, the companies and the citizens whose data is at stake. Each needs the other.

But a lock is only as good as the hands that turn the key every day, and those hands belong to the system administrators of Japanese companies and agencies, not to generals.

Those administrators need budgets, training and the authority to refuse a deadline when a system is not safe to switch on. Every board should ask whether its own have all three.

Mr Suzuki's hooded figure is not hurrying because he does not need to. The gate was open, the old lock was already broken, and nobody was watching until the files had gone.

The allies are bolting the gate. Japan should make sure, this time, that there is still something behind it worth locking in.

ANALYSIS

ANALYSIS: A Curfew Is the Usual Answer. Okinawa Is Owed a More Unusual One.

By William | Senior Political Analyst

The American forces' decision to halt operations for three days and impose a midnight curfew for a month is welcome, and it is the answer they have given before.

In 2012 there was a curfew for every American serviceman in Japan. In 2016 there was a month of mourning, a curfew and a ban on drinking off base. In 2024 the liberty rules were tightened. Each time the restrictions were eased after a while, and each time the promise was that discipline would improve.

The present case shows the limit of that approach. The crime is alleged to have been committed between two and four in the morning, when a lance corporal was already supposed to be restricted off base. A rule that existed did not keep him out of a hotel in Naha.

The governor's demand for a review of the Status of Forces Agreement will be met, as always, with polite reluctance. On this occasion the agreement is not the obstacle: the Japanese police made the arrest and hold the suspect.

What Okinawa is owed is not a renegotiated treaty but proof that rules already in force are enforced. That means joint patrols with real numbers, published figures on breaches of the liberty policy and the penalties imposed, and a standing channel through which the prefecture is told what has been done.

Tokyo's role is to insist on that, in private and in public. The alliance is not weakened when Japan demands that its ally's forces obey its ally's own rules. It is weakened when crimes recur and the response is a month of curfew followed by forgetting.

The bases in Okinawa exist to defend Japan, and the prefecture bears a share of the burden that no other part of the country would accept. Its residents' patience is not an inexhaustible resource of the alliance.

The general who offered co-operation and no apology on Monday was following a legal logic: the suspect denies the charge. Legal logic is not the whole of diplomacy.

Governor Koja, who was elected with the support of the governing parties, arrives in Tokyo this week. The government should give him something that outlasts a curfew.

If it does not, the next governor of Okinawa may not be a friend.

ANALYSIS

ANALYSIS: Three Per Cent Is the Bill. The Tax Cut Has to Be Paid for in Full View.

By Yuki Saito | Economics & Finance Correspondent

The bond market answered the prime minister on Tuesday, a day after her policy speech, in the only language it uses. The coupon on ten-year government bonds was set at 3.1 per cent, the highest since August 1996.

It was not a rejection. The bonds were sold, and the stock market rose to its first close above 70,000 since July. But it was a statement of price.

Ms Takaichi has promised to cut the consumption tax on food and to pay for it without deficit-financing bonds. That is the right promise. The market has heard it, and is waiting for the second half.

Every month without a named source of funding invites investors to supply their own answer, and their answer will be expressed in the yield on government debt.

The cost of waiting is not abstract. Japan's government refinances a large volume of bonds every year. Each one issued at 3.1 per cent instead of under one per cent adds to the interest bill for a decade.

The governor of the Bank of Japan said on the same afternoon that underlying inflation was approaching two per cent. A bank that believes its target is in sight will not hold rates down to make borrowing cheap for the government.

The decision to keep any second supplementary budget small, and to concentrate it on public works and disasters, is the right signal. The party's tax commission, which opened its autumn with the question of funding, should be allowed to give a real answer and not a placeholder.

There are honest options: trimming tax allowances that have outlived their purpose, reviewing subsidies, and accepting that a cut on food may have to be smaller or temporary.

There are also dishonest ones: optimistic forecasts of growth and revenue that have funded promises before and disappointed afterwards.

The market can tell the difference. The best thing the government can do for the tax cut it wants is to show its arithmetic, in full, before the bond market asks again.

ANALYSIS

ANALYSIS: A Nuclear Submarine Is a Decision About the Next Thirty Years. It Deserves a Straight Debate Now.

By Michael Hayes | Deputy Editor, Politics & Policy

The proposal that Japan acquire nuclear-powered submarines will be greeted in some quarters as a scandal and in others as overdue. It is neither. It is a question that a maritime nation in Japan's position should be asking, and answering honestly.

The case for it is geographic. Japan's sea lanes run thousands of kilometres south and west. The Chinese navy now operates far into the western Pacific. A submarine that can stay submerged for months and travel at speed is a different instrument from one that must surface to recharge.

Australia, with less industry and a smaller population, reached the same conclusion five years ago. South Korea reached it last year.

The case against it is also serious. Nuclear boats are very expensive to build and to man. Japan has no naval reactor industry, no base equipped to maintain or refuel one, and no settled answer for the waste. Its conventional submarines are excellent and quiet. Money spent on a few nuclear boats would not be spent on other things the forces need.

Then there is the law. The Atomic Energy Basic Act confines nuclear energy to peaceful purposes, and governments have interpreted that to exclude naval propulsion until it becomes common in shipping. A change of that interpretation should be made openly, in the Diet, and not by drift.

ANALYSIS

The worst outcome would be a decision taken by euphemism. The coalition agreement spoke of next-generation propulsion. The public deserves the plain words.

The alliance would have to be part of the answer. A reactor design and its fuel are not things Japan could acquire without the United States, which has shared naval propulsion technology with only two countries.

None of this needs to be settled by December, when the security documents are revised. What should be settled is that the question is studied seriously, with its costs counted and its alternatives compared.

A navy's fleet is a decision about the decades after the one in which it is made. The boats Japan orders in the 2030s will still be at sea in the 2060s.

That is reason enough to have the argument in full view, now.

ANALYSIS

ANALYSIS: The Books Were Bought Lawfully. The Publishers Still Deserved to Be Asked.

By Naomi Kato | Culture & Society Editor

The news that a company in the Nippan group sold Japanese books to Anthropic for a year without their publishers' knowledge will be read by some as theft and by others as a non-story. It is something in between, and the middle is where the useful argument lies.

On the law, the American position is reasonably clear. A federal judge ruled last year that buying printed books and scanning them to train an AI model was permitted as fair use. Japanese law is, if anything, more permissive about training. And a book, once sold, may be resold.

On trust, the position is different. Japan's book trade runs on relationships built over generations between publishers, two large wholesalers and thousands of shops. Publishers supply books to the wholesalers on the understanding that they will reach readers. A bulk sale abroad, for a purpose nobody was told about, strains that understanding, whatever its legality.

The wholesaler says it did not know the books were for AI training. That may be so. It is also the problem: a buyer taking large quantities over a year is a buyer whose purpose a careful seller would ask about.

The publishers' association has done the sensible thing by asking for an explanation first.

The longer answer is a market. AI developers need large amounts of high-quality text, and books are among the best sources. Publishers and authors have something of value to sell. Licences, negotiated openly, would give developers clean data and give creators a share of what their work makes possible.

Some American publishers have already reached such agreements. Japanese publishers, whose catalogue in Japanese is unique, are well placed to negotiate.

Japan's generous copyright clause for machine learning was written to encourage innovation, and it has. It was not written to make the consent of creators irrelevant, and the government's own guidance says that some uses fall outside it.

Nobody is served by a war between the book trade and the AI industry. Both are better served by rules everyone can see.

Nippan's answer to the publishers will be the first test of whether that is possible.

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EDITORIAL & OPINION

CORRECTIONS AND CLARIFICATIONS

The Japan Morning Post corrects errors of fact as soon as they are identified. Correction requests may be sent to corrections@japanmorningpost.com, giving the date, page and headline of the article concerned.

The notes supplied for today's edition name the American company that bought books from a Nippan group company as Anthropic; it is Anthropic. They describe the purpose of the purchases as possibly educational; the reports on which they draw say the books may have been used to train artificial intelligence. They call the publishers' body the Japan Publishers Association; it is the Japan Book Publishers Association.

The same notes spell the physics laureate's name Hultzen and Harzen; he is Francis Halzen. They give 2011 as the year IceCube was completed; its last cable was lowered into the ice in December 2010, and full operation began in 2011. They say Luna 3 flew three years after Sputnik; it was launched two years to the day after it. They give the first of Monday's medicine laureates as Deisseros; he is Karl Deisseroth. They again give Typhoon No. 28 as Noro; it is Nolo.

The notes say that electric vehicle sales rose two and a half times in the first half of fiscal 2014; the period is the first half of the present fiscal year, April to September 2026. They say that the first stage of the Pacific League Climax Series is Seibu against SoftBank; it is Seibu against Nippon-Ham, and SoftBank, the champions, wait in the final stage. They refer to key members of the Qilin group handed to Germany; one man was handed over, on October 2.

The notes list results from the Asian Games, the Prix de l'Arc de Triomphe, the world judo championships' opening day and other events that were reported in earlier editions. They are not repeated as news today. The notes, citing Weathernews, expect Typhoon No. 29 to become strong on the 9th; the Japan Meteorological Agency's bulletin this morning forecasts that it will do so by Thursday, the 8th.

THE WEEK AHEAD

WEDNESDAY, OCT. 7: American forces in Okinawa suspend operations until Friday. Nobel Prize in Chemistry, about 6:45 p.m. Nagasaki Kunchi opens, to Friday. Emperor's Cup: Urawa v Omiya, Cerezo Osaka v Kagoshima United, Sanfrecce Hiroshima v Iwaki FC. Typhoon No. 27 becomes extratropical. THURSDAY, OCT. 8: Nobel Prize in Literature, about 8 p.m. Markets in mainland China reopen. Draconid meteors in the evening. FRIDAY, OCT. 9: Nobel Peace Prize, about 6 p.m. Midnight curfew begins for American personnel in Okinawa, for 30 days. Takayama autumn festival, to Saturday. SATURDAY, OCT. 10: Climax Series first stages: Seibu v Nippon-Ham, Giants v DeNA; weekend games in the daytime. Typhoon No. 29 forecast very strong. SUNDAY, OCT. 11: World judo championships end with the mixed team event. MONDAY, OCT. 12: Sports Day; Izumo university relay; Nobel prize in economic sciences. WEDNESDAY, OCT. 14: Central League final stage at Koshien. OCT. 18: Yokohama mayoral election; Asian Para Games open. OCT. 19 to 29: Exercise Keen Sword. OCT. 29 and 30: Bank of Japan policy meeting.

TYPHOON AND MARINE ADVISORIES

6 a.m. Wednesday. No. 27 (Choi-wan): large, strong; 37.9 degrees north, 151.4 degrees east; moving north-east at 65 km/h; 970 hPa; winds 35 m/s, gusts 50; storm-force winds 280 km to the east and 110 km to the west, gales 900 km and 560 km. Forecast: extratropical, 972 hPa, at 6 p.m.; 968 hPa near the Aleutians at 6 a.m. Thursday. No. 28 (Nolo): strong; 25.5 north, 165.2 east; moving west at 45 km/h; 970 hPa; winds 40 m/s, gusts 55. No. 29 (Koguma): severe tropical storm; 14.9 north, 163.9 east; moving west at 15 km/h; 992 hPa; winds 25 m/s, gusts 35; forecast 950 hPa and 45 m/s from early Saturday.

Ogasawara and Izu Islands and the Kanto coast: rough seas with swell. Stay away from the shore. Island ferries: services are decided at short notice. Chiba and Kanagawa: ground loose after Typhoon No. 25. No landfall in Japan is forecast for any of the three storms.

MARKET REFERENCE

Tokyo, Tuesday's close: Nikkei 225 at 70,683.98, up 737.12, its first close above 70,000 since July 1. TOPIX 4,183.56, up 38.34. About 74 per cent of

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Prime market issues higher. Ten-year government bond auction: coupon 3.1 per cent, the highest since August 1996. Long-term interest rate: 3.105 per cent. Yen: 158.14 to the dollar, 48 sen weaker on the day. Bank of Japan policy rate: 1.25 per cent; next meeting October 29 and 30. Markets in mainland China reopen on Thursday.

PHOTOGRAPHS AND MAPS IN THIS EDITION

Front page: Marine Corps Air Station Futenma from the air, May 2010 (Sonata, Wikimedia Commons, CC BY-SA 3.0). Typhoon page: map of three typhoons supplied for this edition, from Japan Meteorological Agency bulletins issued between 6:45 and 7:15 a.m. on October 7. Politics: Prime Minister Takaichi at the rostrum of the House of Representatives, file (WPM Productions). International: military aircraft over the White House, file (White House Official). Economy: the Tokyo Stock Exchange (TG2, CC). Weather: the Japan and United States maps supplied for this edition. Editorial page: cartoon by Taro Suzuki.

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THE RECORD BOOK

Leaks of personal information in Japan this year: 506, a record, by a security company's count. Nikkei average: first close above 70,000 since July 1. Ten-year coupon: 3.1 per cent, highest since August 1996. Hanshin: Central League champions in consecutive years for the first time. SoftBank: 91 wins. Seibu: second, two years after losing 91 games. IceCube: 5,160 sensors in a cubic kilometre of ice; the first neutrinos above a peta-electronvolt found by a Chiba University team in data from 2011 and 2012.

NOBEL WEEK

Monday, October 5: Physiology or Medicine, to Karl Deisseroth, Peter Hegemann and Georg Nagel, for optogenetics. Tuesday, October 6: Physics, to Francis Halzen, for the detection of high-energy neutrinos from space with IceCube. Today: Chemistry, about 6:45 p.m. Japan time. Thursday: Literature, about 8 p.m. Friday: Peace, announced in Oslo, about 6 p.m. Monday, October 12: the prize in economic sciences. The prizes are presented on December 10.

PLAY-OFF CALENDAR

CENTRAL LEAGUE: first stage, Giants v DeNA at Tokyo Dome from Saturday, October 10, best of three, the Giants advancing if the series is level. Final stage, Hanshin v the first-stage winner at Koshien from Wednesday, October 14; Hanshin start one win up. PACIFIC LEAGUE: first stage, Seibu v Nippon-Ham in Tokorozawa from Saturday, October 10, best of three, Seibu advancing if level. Final

stage, SoftBank v the first-stage winner in Fukuoka; SoftBank start two wins up under the rule for champions who finish ten or more games clear. Weekend games are played in the daytime. The final-stage winners meet in the Japan Series.

FESTIVALS AND SKIES THIS WEEK

Nagasaki Kunchi: Suwa Shrine and the streets of the city, today to Friday. Takayama autumn festival: Sakurayama Hachiman Shrine and the old town, Friday and Saturday. Draconid meteors: best on Thursday and Friday evenings, with the radiant high in the northern sky after dark; the Moon is a thin crescent rising before dawn, and new moon falls at the weekend. Reading Week: October 27 to November 9.

AFTER A LEAK: A CHECKLIST

Read the company's own notice on its official site. Do not follow links in messages about refunds, prizes or suspended accounts. Change any password used on more than one service, and turn on two-step verification. Check bank, card and telephone statements. If an image of your driving licence or another identity document may have leaked, ask a credit information agency what credit has been taken out in your name. Consumer hotline: 188. Police consultation: #9110.

TYPHOON TERMS USED TODAY

Tropical storm: winds of 17 to 24 metres a second; in Japan this is the lowest class of typhoon. Severe tropical storm: 25 to 32. Strong typhoon: 33 to 43. Very strong: 44 to 53. Violent: 54 or more. Large: gales extending, on average, 500 to 800 kilometres from the centre. Extratropical low: a former typhoon that has lost its warm core and draws its energy from the contrast between cold and warm air; it can remain large and strong. Forecast circle: the area in which the centre is expected to lie with a probability of 70 per cent. Swell: long waves that travel far beyond a storm.

THE SYMBOLS ON THE WEATHER MAP

A sun: sunny. A cloud: cloudy. A cloud with strokes beneath it: rain. Two symbols joined by an arrow: the first sky gives way to the second during the day. Two symbols separated by a slanting stroke: the first sky, with the second at times. The figure in red is the forecast high and the figure in blue the low observed this morning, in degrees Celsius. On the United States map the figures are in degrees Fahrenheit.

UNITS AND CONVENTIONS

Wind speeds are given in metres a second; one metre a second is 3.6 kilometres an hour, or about 1.9 knots. Pressure is in hectopascals. Temperatures are in degrees Celsius except on the United States map. Times are Japan Standard Time unless another place is named; Japan is at present nine hours ahead of

Greenwich, eight ahead of London, 13 ahead of New York, 16 ahead of Los Angeles, seven ahead of Stockholm and five ahead of Baku. Japanese names are given with the family name last. A person arrested is a suspect and is presumed innocent.

USEFUL NUMBERS

Police: 110. Fire and ambulance: 119. Coast guard, for emergencies at sea: 118. Disaster message dial: 171. Police consultation, not an emergency: #9110. Consumer hotline: 188. Anyone who receives a message about a leak, a refund or an account suspension should not follow its links, and should contact the company through its official site or a number found independently. Typhoon bulletins are published by the Japan Meteorological Agency at www.jma.go.jp.

ABOUT THE OPINION PAGES

The editorial states the view of the newspaper's editorial page and is written by its editor; it takes its subject from the day's cartoon. Articles headed Analysis are the judgment of the writer whose name they carry. The news pages report; the opinion pages argue, and say that they are doing so. Letters in reply are welcome at letters@japanmorningpost.com.

SOURCES FOR THIS EDITION

Reports in this edition draw on the Wednesday morning papers and Tuesday night's wires: Yomiuri Shimbun, Asahi Shimbun, Sankei News, Nihon Keizai Shimbun, the Japan Agricultural News, the Izu Shimbun, Daily Sports, Kyodo News and Jiji Press; on Advertimes and ITmedia; on Bloomberg and CNN as reported; on NPB and NTV for baseball; on Weathernews, the Japan Weather Association and the Japan Meteorological Agency for weather; and on the United States National Weather Service for the map of American cities. Where accounts differ the difference is stated.

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TOMORROW'S EDITION

Thursday's edition carries the Nobel Prize in Chemistry; the results of the Emperor's Cup ties; the latest track of Typhoon No. 29 for the holiday weekend; the investigation in Naha and the American forces' stand-down; and the questions to the prime minister in the Diet as they are put.

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