

Geneva Internet Platform

DigitalWatch
NEWSLETTER

You receive hundreds of pieces of information on digital policy.
We receive them, too.
We decode, contextualise, and analyse them.
Then we summarise them for you.

DIGITAL POLICY TRENDS IN SEPTEMBER

1. Push to tax Internet giants accelerating

Internet companies have been taking advantage of low-rate tax European countries in which to establish their subsidiaries. This has resulted in companies paying low taxes – a practice which European countries are increasingly uncomfortable with.

One of the latest tax proposals aiming to curb this practice comes from France, Germany, Italy, and Spain, who are pushing for Internet giants to be taxed on their turnover, as opposed to their profits. The proposal comes after Google dodged a €1 billion fine in July following a sentence by the Paris administrative court (which France has appealed). Since Google had no 'permanent establishment' in France (its European headquarters, staff and servers are in Ireland), the company could not be taxed for its AdWords service in France.

In a different proposal, based on the same philosophy, Estonia is pushing the idea of taxing profits based on the notion of virtual permanent establishment (source taxation of profits).

The proposals are similar, and in fact the Estonian under-secretary for tax has suggested that the proposals could

work in a complementary way, as a two-step approach. Political and technical talks have yet to be held.

The next steps – which we analyse on page 6 of this newsletter – will be critical.

2. Developments in AI: An international race in the making?

The revolution in artificial intelligence (AI) is accelerating. Australia has created its own research institute (the 3A – Autonomy, Agency, and Assurance Institute) while India has set up a task force to understand how to leverage AI for the benefit of the Indian economy and workforce.

Although AI gives rise to many opportunities, it does not come without risks, President Vladimir Putin warned. 'Whoever becomes the leader in this sphere will become the ruler of the world.' In his reaction, Tesla CEO Elon Musk tweeted that the competition for AI superiority could be the cause for a Third World War.

Continued on page 3



WTO PUBLIC FORUM 2017

Our team reported from digital policy sessions during the WTO Public Forum on 26–28 September. Reports are available on our dedicated page. Watch for our final report on 2 October, which will summarise the discussions.

IN THIS ISSUE

BAROMETER



E-commerce, digital rights, and new technologies remained prominent topics this month. We take a look at what happened, and what to expect.

More on pages 4,5

TAXATION



Will the newly proposed tax rules garner enough support? We take a closer look at the proposals aimed at taxing large Internet companies.

More on page 6

UNITED NATIONS



Cybersecurity, emerging technologies, and combating violent extremism were some of the main digital policy topics raised during the annual General Assembly Debate.

More on page 7

ARTIFICIAL INTELLIGENCE



Autonomous systems? Androids and robotics? Intelligence machines? Take our crossword to test your knowledge on all things AI.

More on page 8

Issue no. 24 of the *Geneva Digital Watch* newsletter, published on 30 September 2017, by the Geneva Internet Platform (GIP) and DiploFoundation | Contributors: Stephanie Borg Psaila, Samantha Dickinson, Jovan Kurbalija, Marco Lotti, Virginia Paque, Marilia Maciel, Roxana Radu, Vladimir Radunović, Barbara Rosen Jacobson, Sorina Teleanu | Design by Viktor Mijatović, layout by Aleksandar Nedeljko, Diplo's CreativeLab | In addition to the newsletter, you can find in-depth coverage of developments on the *GIP Digital Watch* observatory (<http://dig.watch>) and join discussions on the last Tuesday of every month online, at local hubs, or at the GIP (<http://dig.watch/briefings>) | Send your comments to digitalwatch@diplomacy.edu

Launch of the 2017 Broadband Commission report

The *State of Broadband 2017: Broadband for Catalyzing Sustainable Development* report, [released](#) on 14 September at the International Telecommunication Union (ITU) headquarters, investigates broadband accessibility and affordability, by monitoring how countries are doing with fulfilling the targets set by the Broadband Commission in 2011. This year's report shows an increased difficulty in defining and monitoring broadband and ICTs, and a growing digital inequality between developed and developing countries.

Launch of the Global Internet Futures report

The Internet Society celebrated its 25th anniversary during an InterCommunity global event spanning six continents. The findings of the *Paths to our Digital Future* report, [launched](#) on 18 September, shaped the conversations in the 17 interactive nodes around the world. The report's recommendations are clustered around the need for online social norms and proactive measures to empower people to shape their own futures.

Meetings of ITU Working Groups

The open consultation on Over the Top services [by](#) the ITU Council Working Group on International Internet-related Public Policy Issues (CWG-Internet) was held on 18 September; the consultation summary is now available. [At](#) the member states only CWG-Internet meeting, which took place on 20–21 September, Brazil reported on how it had conducted a national multistakeholder process to encourage Brazilian entities to respond to the CWG's open consultation, resulting in 8 contributions from stakeholders in Brazil (just over 10% of all contributions). Both the CWG-Internet and CWG on WSIS: Implementation of Outcomes discussed the process of updating plenipotentiary resolutions relevant to their activities, with a number of states noting that there are regional preparatory processes underway to develop draft proposals for updates to resolutions.

Identity in the NBCIS Era

How is the NBCIS (Nanotechnologies, Biotechnologies, Information Technologies, and Cognitive Science) era shaping our identities and the identity of democracy? This question was addressed by philosopher Jean-Michel Besnier at the Flux Laboratory on 20 September during Democracy Week 2017. [Science](#) has the potential to create a new type of human by solving biological and cognitive limitations. Humanity based on free choice, respect for dignity, and the power of human rationality will be challenged.

Artificial Intelligence, Justice, and Human Rights

This side event (20 September) [of](#) the Human Rights Council's 36th session discussed the potential impact of AI on justice systems and human rights. Recognising that AI can generate opportunities and threats to justice systems, the speakers expressed concern about the discriminatory potential of AI. Based on data tainted by human bias, the use of AI in justice systems could result in the judgement of individuals based on correlation and on the group they belong to, rather than on the motivation for and consequences of their actions. A human rights framework could provide an effective way of addressing the risks of AI, and identifying red lines.

Artificial Intelligence Geneva Summit

This half-day event – organised by DigitalSwitzerland, École polytechnique fédérale de Lausanne (EPFL), and the Canton of Geneva on 22 September [–](#) focused on a key controversy: Should robots be given rights, or should we assess their interaction with humans based on empathy levels? Many issues were raised, including advancements in digital epidemiology, robot dependence, data ownership, and corporate governance. In addition to calls for 'privacy by default' and 'ethics by design', speakers suggested that the legal process be transformed to provide timely responses to AI dilemmas.

4th meeting of the Working Group on Enhanced Cooperation

The fourth meeting of the working group of the UN Commission on Science and Technology for Development (CSTD) was held on 25-27 September in Geneva. [Members](#) of the working group remain divided on the issue of whether or not a new UN mechanism is needed to fully implement enhanced co-operation, and whether any new mechanism should focus on intergovernmental decision-making or multistakeholder involvement. There were some broad agreements on less contentious topics (such as alignment with the sustainable development goals (SDGs)). The ongoing differences of opinion on a new mechanism were also reflected in debates at the meeting about the structure of the final report, with some members wanting the report to document discussion on non-consensus recommendations, and others not.

DIGITAL POLICY TRENDS IN SEPTEMBER

Continued from page 1



An anti-Uber taxi protest in London, in June 2014. This month's ban triggered a different reaction: close to 1 million users petitioned to remove a ban on Uber. *Credit: David Holt*

So what are the potential dangers? One of the main threats is the development of lethal autonomous weapons (LAWS). In August, over 100 AI pioneers wrote a letter to the UN calling for a ban on autonomous weapons, and for LAWS to be added to the list of weapons banned under the UN's Convention on Certain Conventional Weapons (CCW).¹ In reaction, the UK said it will commit to ensuring that the operation of its weapons is always controlled by humans.²

Various dimensions related to LAWS will be discussed in Geneva in November, during the first meeting of the new Group of Governmental Experts on LAWS.³

3. Governments apply more pressure on tech companies to remove extremist content

The fight against extremist content was among the digital policy themes at this year's UN General Assembly (UNGA) debate. UK Prime Minister Theresa May called on tech companies to act.⁴ The EU also called on the major online companies to develop, as a priority, the means for automatic deletion of extremist content immediately after posting.⁵ France also made reference to this challenge.⁶

At a dedicated discussion in a parallel event to the UNGA meeting, May called on Internet companies to remove extremist content within one to two hours of posting.

It will not be easy for tech companies, who have already indicated that this will be 'an enormous technological and scientific challenge'.⁷ In addition, there are free speech issues: legitimate content can be erroneously removed. Italian Prime Minister Paolo Gentiloni was clear: 'We can't reduce our ambition because of these difficulties',⁸ while the Prime Minister of the Netherlands, Mark Rutte, urged big companies to help small companies.⁹

Meanwhile, leaders of BRICS countries (Brazil, Russia, India, China, and South Africa) also expressed concern about violent extremism online, and confirmed their commitment to prevent and counter its spread.¹⁰

4. ICOs facing uncertain future in China

The cryptocurrency crowdfunding phenomenon of Initial Coin Offerings (ICOs) – used by start-ups to attract investment

through new cryptocurrencies – is facing a crackdown in China, after authorities banned the practice. China has also ordered the return of any investments made through ICOs.

The impact is significant: in China, over 100 000 investors generated close to USD\$400 million.

There are at least two main reasons for China's ban. The first is that authorities are seeking to protect the investors from an unregulated market. The second is that quite a few ICOs were fraudulent or involved in financial scams. Analysts have also said that China is seeking control over cryptocurrencies, especially Bitcoin. It remains to be seen whether the ban will be temporary, and what the reaction from other countries will be.

Many other countries face similar dilemmas about how to deal with ICOs and cryptocurrencies. More policy reactions and initiatives are expected in the coming months.

5. Uber banned in more locations: this month, it's London

London's transport regulator Transport for London (TfL) announced it would not renew Uber's licence due to 'a lack of corporate responsibility in relation to a number of issues which have potential public safety and security implications'.¹¹

Within hours, Uber managed to rally over 600 000 signatures to petition against the ban,¹² with the company hoping it would reach the one million mark. The company has also said it was prepared to offer concessions on safety, in order to keep its licence.¹³

There are several important implications to this ban. Apart from the fact that it would limit consumer choice, Uber estimates that the ban will affect 40 000 drivers working in the city. Another consequence – for the company – is the financial loss. Uber is currently used by 3.5 million users in London.

Can this be considered a move against ride-sharing apps, and by extension, the sharing economy? Given the high-level talks which ride-sharing competitor Lyft has had with officials in London,¹⁴ it seems unlikely that the ban is the result of pressure from traditional businesses.

DIGITAL POLICY: DEVELOPMENTS IN SEPTEMBER

Global IG architecture



increasing relevance

BRICS leaders expressed support for the central role of the UN in developing norms of responsible state behaviour in cyberspace. They emphasised the principles of the international law as enshrined in the UN Charter and reiterated the call for a UN-based universal regulatory binding instrument on combatting cybercrime.[↗](#)

Sustainable development



same relevance

The ITU and the UN Broadband Commission for Sustainable Development's *The State of Broadband 2017: Broadband Catalyzing Sustainable Development*[↗](#) provides a global snapshot of Internet access, examines trends in connectivity, reviews policy and regulatory developments, and presents a number of policy recommendations. It emphasises the utility of broadband technologies in accelerating the SDGs related to food security and ending hunger; health and well-being; inclusive and quality education for all; and protecting the environment.

Security



increasing relevance

During the 72nd session of the UN General Assembly, Russia formally announced it had drafted a universal convention on countering cybercrime.[↗](#) Foreign Minister Sergey Lavrov proposed to open the discussion during the current UN session.

Europe is still not well-equipped when it comes to cyber-attacks, which can be very dangerous to the stability of democracies and economies, European Commission President Juncker said in his State of the Union address.[↗](#) The EU therefore plans to beef up the cyber agency ENISA.[↗](#)

Researchers have discovered a botnet, called 'Onliner', that has collected 711 million email accounts used to send spam messages.[↗](#) In another attack, the personal data of 140 million people was exposed by a breach on Equifax's website,[↗](#) one of the three biggest consumer credit reporting companies in the USA.

New tax proposals and regulatory rulings have placed e-commerce and the Internet economy under focus this month. *Read on pages 1,[↗](#) 3,[↗](#) and 7.[↗](#)*

The members of the North American Free Trade Agreement (NAFTA) are undertaking another round of negotiations[↗](#) on 23–27 September. An issue that remains unclear is how much of the Trans-Pacific Partnership's (TPP) terms will carry over into the NAFTA process.

Economic ministers from the Regional Comprehensive Economic Partnership (RCEP) – a proposed free trade agreement between the 10 member states of the Association of Southeast Asian Nations (ASEAN) and the six states with which ASEAN has existing free trade agreements – pledged to ramp up their negotiating efforts on an extensive regional free trade deal, following a meeting in Pasay City, Philippines.[↗](#)

In a communication by the European Commission to the European Parliament on a 'Balanced and Progressive Trade Policy to Harness Globalization',[↗](#) the Commission laid out its vision and priorities in the field of trade negotiations.

Ahead of the 11th WTO Ministerial Conference, the WTO Public Forum in Geneva focused on priorities and ways forward on digital commerce.[↗](#)

La Agencia Española de Protección de Datos (AEPD), Spain's data protection watchdog, has fined Facebook €1.2 million for collecting personal data from Spanish users without informing them of how it would be used.[↗](#)

Digital rights



increasing relevance

Google is being sued for gender discrimination in its employee practices, over pay discrimination and channeling of women into lower paying job tracks.[↗](#) Google denies the claims.

Authorities in Togo have ended an Internet shutdown after blocking Internet access during protests on 5 September,[↗](#) while Saudi Arabia has decided to lift the ban on Voice over Internet Protocol (VoIP) services, such as Skype, which have been prohibited since 2013.[↗](#) In India, new rules will legalise temporary phone and Internet service shutdowns 'during a "public emergency" or for "public safety"'.[↗](#)

Jurisdiction & legal issues



same relevance

Google will start complying with search warrants requiring it to produce data stored in its servers overseas, the US Justice Department has said. [One exception will be search warrants issued by courts in the Second Circuit \(Connecticut, New York, and Vermont\)](#), after a New York judge ruled last year that Microsoft could not be obliged to provide data stored overseas on the basis of search warrants.

Privacy Shield raised the bar for transatlantic data protection, the US Secretary of Commerce and the European Commissioner for Justice, Consumers and Gender Equality said in a joint press statement.

Infrastructure



increasing relevance

Amazon has put forward its arguments to the ICANN Board, urging it to immediately approve its applications for .amazon. [In a resolution issued on 23 September, the board stated that further consideration was needed, and asked its Accountability Mechanisms Committee to review and consider the recommendation and provide options for the board on how to address it.](#)

In Spain, judicial authorities issued an order asking Fundació puntCAT, the registry for .cat, to block all .cat domain names that host any kind of information about the independence referendum in Catalonia planned for 1 October. The referendum had been ruled illegal by the Spanish courts.

A new subsea cable connecting North America with mainland Europe has now been completed. [The transatlantic cable Marea, which is 6600 kilometers long, has a capacity of 160 terabits per second.](#)

Net neutrality



same relevance

The Federal Communications Commission (FCC), which is expected to make a final decision with regard to the US net neutrality rules by the end of the year, received millions of public comments during an online consultation period.

Meanwhile, in an interview, FCC chair Ajit Pai is encouraging US Congress to take hold of the issue and pass legislation.

New technologies (IoT, AI, etc.)



increasing relevance

Robotics, AI, and big data were among the topics discussed during the G7 Innovation Week. [ICT ministers called for an inclusive, open, and secure fourth industrial revolution, and committed to contributing to multistakeholder efforts towards a 'socially beneficial AI'.](#) [Science ministers reiterated support for open science, and noted the role of big data in scientific work,](#) while labour ministers underlined the need to place people and work at the centre of innovation.

IBM and the Massachusetts Institute of Technology's newly created AI Lab will work on AI algorithms, the physics of AI, the application of AI to industries, and advancing shared prosperity through AI. [Canadian Prime Minister Justin Trudeau welcomed the opening of a Facebook AI lab in the country.](#)

The International Civil Aviation Organization (ICAO) has proposed the creation of a single global drone registry. [In the USA, the Department of Transportation and the National Highway Traffic and Safety Administration released a new set of guidelines for automated driving systems \(ADS\),](#) which provide a nonregulatory approach to automated vehicle technology safety'.

AHEAD IN OCTOBER



For more information on upcoming events, visit <http://dig.watch/events>

PROPOSED TAX RULES FOR DIGITAL ECONOMY PICK UP MOMENTUM

In Europe, new proposals for taxing the Internet giants were in focus this month. Will they garner enough support, or develop into a two-speed system if not all countries are on board? We take a closer look at the proposals, and what we can expect.

The proposals

The EU's big four's proposal for an 'equalisation tax' on turnover would mean that Internet companies like Google, Apple, Facebook, and Amazon would be taxed wherever they generate revenues rather than where they are registered.

At the moment, the companies can pay minimal taxes in Europe thanks to subsidiaries in low tax rate countries like Ireland. Their profits are currently reported where the subsidiary is located, even if revenues are generated in other countries.

On the other hand, under the virtual permanent establishment concept advanced by Estonia, companies would be taxed 'where the value is created' rather than where the companies are registered.

The arguments for and against

At the heart of these proposals is the fact that technology has deeply transformed the economy. The goods and services offered by the Internet giants are varied, which creates a bigger challenge. Existing tax rules may not be adequate enough for today's digital economy.

In light of the fast growing digital economy, France, Germany, Italy, and Spain believe that 'economic efficiency is at stake, as well as tax fairness and sovereignty'. While they support existing initiatives at the G20 and OECD, the four countries argue that these plans must be complemented, and express their eagerness to 'move ahead quickly'.

On the other hand, countries such as Ireland argue that the proposed equalisation tax, seen only as a short-term fix, could create an internal rift between member states in favour of the new proposals, and others who are reluctant to agree. It is also argued that the proposals could harm Europe's competitiveness and alienate companies away from Europe. The British chancellor has warned against 'angering Washington', which could abandon global tax reform in retaliation.

Both proposals also carry technical challenges: the equalisation tax on revenues could penalise companies that are making a loss, whereas the concept of virtual permanent establishment could trigger double-taxation issues.

The Estonian Undersecretary for Tax is more optimistic about the prospects of the two proposals, and believes that they are compatible: while the big four's proposal may be a 'quick fix', the Estonian proposal could provide a more structural solution.

What's next?

Despite the mixed reactions, the European Council aims to reach a common understanding on new EU-wide rules by December, after which the European Commission will draft proposals for 2018, the same period in which an OECD report for the G20 Finance Ministers' meeting is expected (see outline of interim report). Although momentum has since picked up, whether EU countries will reach common understanding is still uncertain.

If the divisions persist, European Commission President Juncker has been clear in supporting a qualified majority decision: 'I am also strongly in favour of moving to qualified majority voting for decisions on the common consolidated corporate tax base, on VAT, on fair taxes for the digital industry and on the financial transaction tax. Europe has to be able to act quicker and more decisively.'

If this fails, a procedure leading to enhanced co-operation can be set in motion. A dual-speed system would mean that countries like Ireland could maintain a competitive advantage by opting out, but this would certainly cause friction with other member states.

The taxation issue was discussed by EU heads of state during the Tallinn Digital Summit, on 29 September. In his Preliminary Conclusions, the Estonian prime minister noted that EU member states are 'committed to a global change of taxation rules and to adapting our own tax systems to ensure that digitally-generated profits in the European Union are taxed where value is created'.

In the long run, the Commission will be pushing for progress at OECD level. A fundamental reform of international tax rules would ensure a better link between how value is created and where it is taxed. But the Commission also made it clear, in a 21 September communication, that Europe should move ahead on its own if there is no global progress on the issues.






DIGITAL POLICY ON THE AGENDA OF THE UN GENERAL ASSEMBLY

Leveraging the benefits of new technologies, and combatting cybercrime and violent extremism were two of the main digital policy issues raised by world leaders during the annual debate in New York to mark the start of the 72nd session of the UN General Assembly.

Dealing with the challenges of digitalisation and artificial intelligence

Referring to the implications of AI, UN Secretary-General, António Guterres, said that neither governments nor international organisations are able to cope with the challenges on their own. New strategic thinking, ethical reflections, and regulations are needed, and the UN can act as a forum in which member states, the civil society, companies, and academia can work together to pave the way.

Several countries – including Greece, Singapore, Serbia, and Vietnam – highlighted the advantages and challenges of a digitalised world that is embracing the fourth industrial revolution. The UN could play a role in facilitating ‘a transformation towards the age of digital economy’ (Croatia), and in dealing with the economic disruptions caused by digital technologies (Singapore). The impact of digitalisation, Internet access, and sustainable development needs to be dealt with hand in hand, noted Switzerland, which invited countries to discuss such issues at the upcoming IGF meeting on 18–21 December, in Geneva.

Cybersecurity concerns and state behaviour in cyberspace

A greater dependence on digital services has resulted in greater vulnerabilities in cyberspace, noted Estonia. While digital progress cannot be stopped, countries need to continue their work on analysing how international law applies to the use of ICT.

‘Cybersecurity has become a source of deep insecurity,’ noted India, while Uruguay said that cyber-attacks represent one area where compromise in the international community is necessary. UN Secretary-General spoke about cyberwar as a ‘reality’ capable of affecting the relations between states and destructing structures and systems of the modern society.

Russia spoke against the militarisation of the digital space, which should not be transformed into ‘an arena of

politico-military confrontations’ or ‘an instrument of pressure or economic danger’. The country called on the UN to focus on the elaboration of rules for responsible state behaviour in the digital sphere. Cuba referred to international treaties that can ‘regulate co-operation in order to achieve a safe cyberspace’.

Addressing cybercrime

Cybercrime is one of the main problems confronting today’s world. Several countries reinforced the need for international co-operation in dealing with the dangers of cybercrime (Nigeria, Netherlands). Estonia made an appeal to UN members to accede to the Council of Europe (CoE) Convention on Cybercrime.

Russia noted that it had drafted a universal convention on countering cybercrime, which also deals with hacking. The country proposed that UN member states start discussing the draft convention during the current UNGA session.

Offline human rights must also be protected online

Estonia underlined the need to ensure that the same rights that people have offline are also protected online, and Georgia spoke about the inclusion of the right to access the Internet in its recently revised constitution. Uzbekistan proposed a UN International Convention on the rights of youth, while Jamaica referred to the protection of children from online abuse.

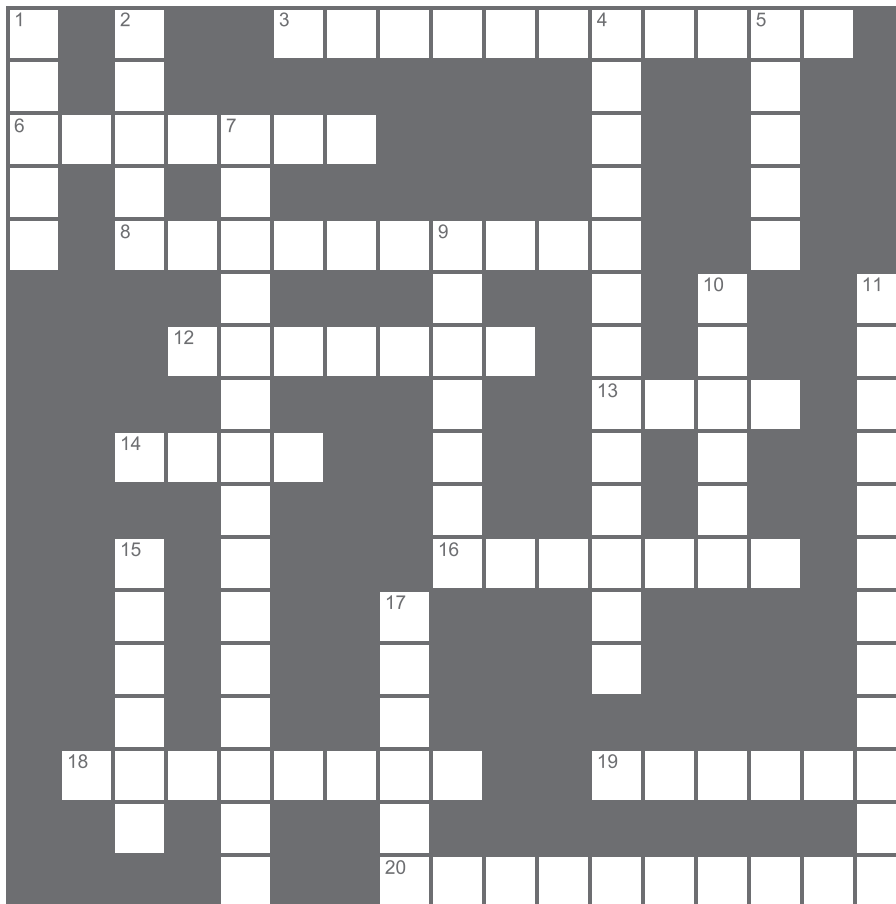
What is not said often matters equally or more than what is said. A few ‘silences’ were noticeable. Unlike in the previous year, Brazil did not make any reference to digital issues. Given Brazil’s prominent role in digital policy, this was an interesting development. The USA referred briefly to the fact that ‘new forms of aggression exploit technology to menace our citizens’.

View our map of countries and the references to digital policy, on our dedicated space. [↗](#)



Credit: UN

Artificial intelligence is the hot topic of the moment. Discussions on its applications and implications are full of new concepts and jargon, and developments are faced-paced. Are you keeping abreast? Try our crossword puzzle to find out, and visit our dedicated space to read about the policy developments.



Across

- 3 Ensuring that AI algorithms function in a transparent and _____ way is important in dealing with challenges related to AI algorithms possibly making unfair and discriminatory decisions. (11)
- 6 Germany issued a set of guidelines for the programming of automated _____ systems, 'in the case of unavoidable accidents, any qualification of people according to personal characteristics... is not permitted.' (7)
- 8 A new Group of Governmental Experts will meet in Geneva in November, to discuss questions related to emerging technologies in the area of lethal _____ weapons. (10)
- 12 As AI systems work with considerably large amounts of data, there are concerns about _____ and data protection. (7)
- 13 Family name of Tesla's CEO, who has been warning us about the dangers of artificial intelligence developments. (4)
- 14 A company that has started testing self-driving cars. (4)
- 16 The Institute of Electrical and Electronics Engineers (IEEE) launched a Global Initiative for _____ Considerations in Artificial Intelligence and Autonomous Systems. (7)
- 18 Internet company which has recently opened its fourth AI research lab, in Canada. (8)
- 19 A universal basic _____ is seen by some as a way to compensate the workforce for jobs they might lose because of AI and automation. (6)
- 20 AI is one of the main drivers of the so-called fourth industrial _____. (10)

Down

- 1 A country which has recently set up a task force to understand how to leverage AI for the benefit of its economy and workforce. (5)
- 2 An Asian country which plans to become a world leader in AI by 2030. (5)
- 4 International movement that aims to enhance human intellect and physiology by using artificial intelligence and other advanced technologies. (13)
- 5 One of the challenges that regulators need to address concern the _____ status of AI machines: should they be treated as natural persons, legal persons, objects, etc.? (5)
- 7 Organisation whose '2017 Global Internet Report' describe AI and the Internet of Things as drivers of change. (8,7)
- 9 _____ learning' is an area of computer science that gives computers the ability to learn without being explicitly programmed (Arthur Samuel). (7)
- 10 'Whoever becomes the leader in [AI] will become the ruler of the world', said the president of _____. (6)
- 11 Main character in a 19th century book, written in Geneva, which deals with an artificially created human being. (12)
- 15 The name of a Google-initiated start-up which launched Conversation AI, a tool aimed to automatically detect hate speech online. (6)
- 17 Advancements in AI lead to concerns about disruptions in the _____ market, as some jobs may become obsolete. (6)

Down: 1 India, 2 China, 4 Transhumanism, 5 Legal, 7 Internet Society, 9 Machine, 10 Russia, 11 Frankenstein, 15 Jigsaw, 17 Labour, 18 Facebook, 19 Income, 20 Revolution, 12 Privacy, 13 Musk, 14 Uber, 16 Ethical, 17 Facebook, 18 Frankenstein, 15 Jigsaw, 17 Labour.



Subscribe to GIP Digital Watch updates at <https://dig.watch>