Artificial Intelligence is Here to Stay

by Roxana Dunnette

The International Telecommunications Union (ITU) hosted another edition of the Artificial Intelligence (AI) for Good Global Summit from July 6-7, 2023 in Geneva, Switzerland, this time completely different as robots were also in attendance. Nine humanoid robots and more then 40 general-purpose robots were at work at the summit.

More then 3000 delegates from governments, businesses, academia, civil society, ambassadors and UN sister organizations were present to listen and debate AI issues presented by a large number of inventors, scientists and visionaries on the benefits and risks of AI unchecked.

The summit featured a series of inspired AI performances, interesting presentations, drinks and food prepared and served by robots, humanoid robots talking and doing things and the company of incredible people.

Doreen Bogdan, Secretary General of the ITU set the tone: "Let's show the world what an inclusive, a safe and a responsible AI can do for humanity," she declared. She focused the discussions on how AI could help the implementation of the 17th United Nations Sustainable Development Goals for an inclusive society and what can be achieved by 2030.

"AI can be as good or as bad as humans can be," said Sundar Pichai, CEO of Google. The possibilities are huge, the risks great but it is not too late for policy makers to establish rules to mitigate the dangers and have AI only for Good. In the wrong hands AI tools could cause many problems from creating fake content to cyberattacks

The summit featured life-like robots to showcase the capabilities of AI for various applications such as health, space, earth sciences, among others, and how it will transform how we work and play.

or destabilizing financial markets.

If AI were to become capable of making plans and act upon them – especially if they are not based on human values, who knows if deciding humans are not becoming obstacles?

At this Summit, there were a numerous presentations on the benefits of AI in health care, education, agriculture, climate control, space and earth, architecture, arts, among others.

There was a strong call for regulations at the global level and countries level to ensure societal protection. Among the questions asked were: Should we have a Global Observatory on how AI should work, empower existing ones? Companies,

governments who should regulate? Who is responsible for AI devices?

At the country level there are concerns about lack of debate, knowledge of AI by regulators, lack of sectoral agencies, the complexity and speed of AI innovation that will make almost impossible a central supervision. Databases in languages other than English is a problem so are countries regulatory traditions. The Summit provided a platform to debate all those problems having a risk-based approach in using AI. Meanwhile, the US Senate announced plans to legislate AI, UK PM calls for a Global Summit on AI safety, EU the same. The concern is there.

Regulatory and Ethics go hand in hand. Human rights, inclusivity, diversity should be taken into consideration.

The European Union AI ACT gave a wide range of rules designed to govern the use of AI. The AI ACT bans for example AI that tracks citizens based on their behavior and the facial recognition in public places. Predicting all potential risks of AI would be impossible and will stop innovation.

CEOs of large investment funds praised AI but seek rules on its ethical use. While waiting for governments to speed up regulations of AI, they set Guidelines for how companies in which they invest should use "AI ETHICALLY"--a set of standards to be unveil in August this year. A responsible investment framework will be the norm.

The ITU is responsible for AI Standardization (see the chat with Seizo Onoe, Director of ITU's Telecommunications Standardization Bureau), policy and digital transformation in countries with fewer infrastructures.

Putting human values at the core

of this work is a priority. The new ITU–T Focus Group on AI Ethics will issues a report by the next summit in May 2024, same for the ITU and UN-HCR report on AI and Human Rights.

AI for Health

No other subject attracted more attention on AI ethics than **AI for Health (AI4H).** Automated medicine benefits from a massive amount of biological data for today's computer algorithms to quickly find patterns that would take humans years to discover.

AI could be used to accelerate discovery time for new medicine, do clinical evaluation , predict pandemics, evaluate the use of robots, recreate medical ethics, solve mystery about genetic disorders and identify potential treatments, educate.

WHO already published two guidelines on:

- Ethics and Governance--Accelerating evidence for AI based medical devices, a frame work for training, validation and evaluation.
- ITU –T Focus Group on AI for Health issued in March: Clinical evaluation on AI4H.
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At the Summit, WHO, ITU and WIPO signed the " GLOBAL INITIATIVE on AI4H " which will:

- Enable (standards, policies, governance, guidelines)
- Facilitate (investments, global countries experts)
- Implement (sustainable models of AI programs at country level)

Ethics will evolve too, as based AGI programs with updated inputs

will decide which ethical norms are necessary.

Visionaries and authors like Noah Hariri and Ray Kurzweil entertained the debate benefits vs. risks of AI, reaffirming that by 2029 computers could reach human intelligence and in the next 20 years AI will change what human means.

Let's wait and see ….

AI for Space and Earth Science

The applications of AI for space and earth science are endless: from machine-based detection and monitoring of satellite operations to cleaning the space from debris, to missions to Mars. More then 60,000 objects are in space and satellites are not protected. Accidentally objects fall on earth and add to the pollution. AI algorithms can track them, destroy them or bring them back.

AI is key in this age of planetary transition. We can use the information provided to improve the social behavior, have less pollution and better planetary design. Mapping water resources, carbon print, bio diversity, agriculture fields, people, it is easier and we could use LLM integration for predictive analysis, to establish trends, climate patterns for research or measurements.

You can't manage what you can't measure.

AI outputs are useful in viewing alerts (deforestation for example), drive action, detect dangers in real time and if plugged into Char GPT get an answer without going to the field.

AI Robotics can retrieve satellites from orbit or prolong their life and help with operational and financial planning. All AI Robots have on-board

intelligence, self-algorithms, autonomous orientation command (to find earth),autonomous servers. They have navigation cameras to drive, to choose sites to explore and select samples. The ingenuity helicopter is AI piloted.

AI and the Workforce

AI will alter work for most knowledge workers, shifting skills they need and changing the staffing, but it is not so bad as new jobs like AI Personal Assistant to fix AI for every device, will emerge.

AI will empower humans not replace them, do jobs and tasks too difficult or dangerous for them.

The immediate effect could be unemployment but if the demand is there this technology creates jobs.

If we choose applications not technologies that addres "huge markets unexpressed needs, for example: deliver education and health care in poor countries" (as one distinguished speaker said) it will be good for people.

Humans have emotional intelligence and will retain their role and in many situations have the advantage.

Chat with Seizo Onoe, Director of ITU's Telecommunication Standardization Bureau

There was a lot of talk at this Summit about the urgent need for AI Governance, Regulations and Standardization.At ITU-Telecommunications Standardization Bureau (ITU-T), Artificial Intelligence and Machine Learning are getting a larger share of ITU-T's standardization work in areas like AI and 5G future networks, networks management, coding and multimedia applications, digital health, environmental efficiency, autonomous networks and more. We asked *Seizo Onoe* Director of ITU-T, about the status of standardization work in enabling the safe use of AI in the future.

What is the AI standardization process and what is the progress so far?

ITU-T Study Groups develop recommendations on technical specifications, in some cases on guidelines that are published. In Study Groups only ITU members governments, private sector, academia participate. We created more then 10 years ago Focus Groups open to all, everybody outside ITU can join even if they are not members. Machine Learning for 5G future Networks--it describes the frame work and the active chart to implement AI in 5G networks.

In St. G. 13, Future Networks and ST.G.16 Coding, we have inputs from Focus Groups for "AI and ML for multimedia coding and multimedia applications." They are currently under evaluation.

What can be standardized in regard with AI and ML ?

Standardization is not only for technical specifications there are other phases, it is important to clarify terms and definitions which could become standards.

What is the time line from Focus Group Work to standard?

It is not fixed it depends on the theme. If we get a consensus it can go quickly, in some cases if there is no result the process is finished. We have new activiities in Focus Groups about Autonomous Networks, Al and Ethics for Health.

How are the AI standards going to be implemented in this virtual world?

Implementation of AI is not so physical like telecommunication systems but even in telecom we have activities in software interface and some outside organizations

Seizo Onoe

define applications. In either cases we need to implement such specifications, We also have activities in open sources and we expanded our areas of standardization in collaboration with other organizations that have their own technical activities. At this Summit ITU signed with WHO and WIPO a "Global Initiative AI for Health." This Summit just became to a platform to discuss AI Governance, it just happened thanks to Chat GPT . Focus Groups create some input and paper work but it is not a a recommendation. In some cases after Focus Groups successful discussions results move to Study Groups then if members agree it will become recommendation, then standard. I can give you an example: I attended just before the Summit Study Group 5 meetings. We had a Focus Group on 5G Networks and their input went to Study Group, then we had a good outcome and became a Recommendation T.3172.

Men create the data used by algorithms. Using Generative AI could speed up many tasks and increase productivity, but how do you get AI to do only things you want, make sure is aligned with human intentions and is a service to humanity? As more interdisciplinary experts join the teams, AI will not endanger confidentiality or security.

NO changes NO progress, there is not one solution but many choices!

Creativity and Robots for Good

Is AI an opportunity to humanity?

AI just reinvents the human creativity. AI can create, work, comment on changes, understand the world perform with humans and engage you in many different ways.

The summit featured a FESTIVAL of ROBOTS, 40 + general-purpose robots and 9 humanoids and it was so nice to watch some robots "create" and display "artistic intelligence."

The all-purpose robots on display were for manufacturing, maintenance and repairs (accelerator at CERN), for dangerous operations, (rescue, police, nuclear facilities). We had autonomous robots for disaster management, robots that assist autistic children, help with learning or socially assistive robots for older adults or for recovery stimulating patients with cognitive disorders, robots for medical rehabilitation or that work in restaurants and bars.

There were performances on stage by artist playing music created by AI (what about the copyrights?) and jam sessions with real musicians and humanoid robots.

Why humanoid robots are creat-ed? – Because they can have a better connection with us and have multiple functions in the society. Avatars could be used in kindergartens, supermarkets, amusement parks and hotels as guides or information points, can be public speakers and presenters or play games with us.

Among the robots include the following:

GEMINOID (Hiroshi Ishiguro's avatar) good at gestures can sell bread in a bakery; NADINE (Nadia Thalman's avatar) uses Chat GPT to understand the environment and issue comments.

DESDEMONA, the rock star delighted us with a live performance with a jazz band on stage.

GRACE, the medical care robot provides advices to nurses, informs patients on their rights and medical ethics.

SOPHIA is the first robot Innovation Ambassador to UNDP.

AI- DA, my favorite robot artist is painting, does portraits, and makes us think differently about robotic artwork.

When asked at the press conference "What do you feel when you paint?" the robot answered, "I don't have feelings, I like to experience and be around people but I can't experience what you do. I can't suffer."

Yes, we had the first press conference with all 9 humanoid robots and their creators but only the robots answered our questions.

In the end DESDEMONA the rock star robot told us:

"*Use AI for GOOD, let's get wild and make the world the background.*"

Note: This article was *not* written by ChatGPT or a robot.

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