

Open Interfaces are key to the success of the future of Mobile Telecommunications, promoting innovation and competition closing the digital divide.

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Mobile telecommunications networks are critical networks for closing the digital divide , as are electrical grids and water supply.

In the last decade, competition and choice in the mobile network supply chain has dwindled. Globally there are now only a very small number of vendors providing closed, proprietary systems, especially in the Radio Access Network (RAN). The discussion that is now taking place on the 5G Open RAN networks is key to the future in closing the digital divide.

In addition, recent bans or limits on the participation of vendors labelled high risk will help secure the networks but have effectively further restricted the choices for mobile operators in many countries while directives to rip and replace banned equipment have also imposed additional costs.

Unsurprisingly, many Governments have begun pushing for more diversification in the vendor supply chain, and many mobile network operators have been searching for secure, reliable, cost-effective alternatives to the closed proprietary systems supplied by the two remaining incumbent suppliers.

We firmly believe Open and Interoperable Interfaces that are fundamental for Open RAN is the answer to these demands. Open RAN is not a technology. It is an architecture characterized by open and interoperable interfaces between all the elements of the network. By opening the interfaces, allowing multiple suppliers to compete to provide different subcomponents within the RAN, Open RAN injects competition into the supply chain for 4G/5G networks at all frequency bands (including millimeter wave) while also supporting earlier network generations.

Rather than a restricted choice, operators now have freedom of choice in how they construct their networks – there are now more than 60 Open RAN suppliers – which opens the door for even more innovation and cost reduction

As stated, Open RAN is an architecture and has to be differentiated from “Open vRAN”, which is an Open RAN system implemented using cloud-native (virtualization) technology. Very often people use the term Open RAN to indicate both, but Open RAN could be implemented with legacy technology.

We believe that Open RAN delivers substantial benefits through Open Interfaces:

- It results in cost efficiencies estimated at 49% CapEx savings within one year and 31% OpEx savings over five years.
- The ability to move the RAN to the cloud offers potential energy cost reductions, as the RAN processing can now be shared among many cell sites and allows for more efficient management of network traffic load fluctuations during the day and evening. Modelling of the traffic profiles over a 24-hour period across different types of cells, demonstrates that power savings in the range of 30-55% can be achieved.
- Open RAN increases security. Open interfaces and “Zero Trust” principles allow multiple independent parties to continuously test the security of the network elements and the system. This makes it more likely that any vulnerability or threat is detected and remedied. Open interfaces also support more virtualized network functions, enabling additional security controls through micro-segmentation and containerization.
- It opens up networks to more participants, with competition and innovation benefits. As Rakuten, DISH and other MNOs have demonstrated, it allows complete system integration with a broad supplier ecosystem

Three years ago, to fill the gap in existing 3GPP specifications, where 3GPP continue to allow proprietary interfaces, several MNOs founded the O-RAN Alliance to help support open and interoperable interface specifications. Today, the Alliance is led by 28 operators with some 240 suppliers participating. However, the O-RAN specifications have not yet been adopted within 3GPP standards.

Now, in a [Ministerial Declaration](#), the G7 Digital and Technology Ministers have recognized the potential of emerging open and interoperable network architectures. We welcome the acknowledgement that it is essential that the development of digital technical standards is underpinned by transparency, openness of process and participation, relevance, and consensus-based decision-making.

The Framework for G7 collaboration on Digital Technical Standards is a step in the right direction. As part of that commitment to international collaboration G7 Governments should work together to review the effectiveness of the governance and operational frameworks of global and regional standards setting bodies.

G7 Governments have an opportunity to support an increase in participation by smaller Open RAN vendors in the international standard setting organizations (that are unable to match the spending of large established vendors) and advocate for the advancement of open and interoperable interfaces in global standards.

Participation in standard setting bodies is expensive and resource intensive, which has hindered the ability of smaller Open RAN suppliers to meaningfully participate. Correcting such dynamics in standard setting will contribute to creating a level playing field where smaller, innovative Open RAN vendors can compete alongside legacy suppliers.

We are encouraged by the significant investments announced by several G7 nations such as Germany, Japan, the UK and the USA, who are significantly supporting Open RAN and opening up their markets to a greater competition and innovation as they build their next generation networks.

Governments can help accelerate large-scale Open RAN development – and overcome the dependence on, and lock-in of, legacy vendors caused by closed proprietary architecture – by using R&D funding and financial incentives for challenger vendors and mobile operators adopting Open RAN networks that have been developed to open interface specifications.

We are both pleased and grateful with the progress made in advancing Open RAN. But we believe that the single biggest blocker to the future success of Mobile Telecommunications remains the influence that incumbent vendors have in standard-setting bodies. We are very glad that this issue has come up in the G7 discussions but are strongly of the view that government and the ITU should grasp this issue to advance vendor diversification.

The UK Livingston report was very clear that the current system of standard setting is not working for the UK or its allies in delivering diverse, secure and resilient telecoms network equipment. It also said that "the Government has a key role to play in **coordinating national activity on telecom standards across government and with industry, academia and organizations.**" Standard setting bodies have, over the years, generally had members who are representatives of, or are close to, incumbent suppliers. As a result, they have been slow to see the possibility of new approaches and are reluctant to update standards in a manner that facilitates the adoption of these innovations.

We have seen the same dynamic in other sectors such as aviation (where incumbent airlines dominate the industry bodies which grant slots in major airports) or energy (where incumbent suppliers control the code system that governs the rules energy companies must live by): standard setting bodies will tend to, consciously or unconsciously, maintain rules and standards that favor the commercial interests of the companies already present in the sector.

We understand that standard setting has a strong dimension of international coordination and

cooperation, and we also accept that it is not the government's role to set such standards directly. But we urge you to use the immense convening power of government to make clear the vital importance to the world economy of ensuring that standard setting bodies are not protecting the interests of incumbents but are instead encouraging new and innovative entry while still ensuring the requisite level of quality.

To this end, we hope that NTIA can play a major role in getting the industry together and encouraging it to make clear progress in this area, and to hold it to account if it does not. We also urge NTIA to consider how to best assist smaller vendors to participate more closely in the workings of standard setting bodies, as effective participation is time and resource intensive. This is the biggest risk to vendor diversification, and inactivity will merely prolong the status quo. A set of open standards that facilitates entry and innovation is key to changing the future of Mobile Telecommunications, promoting innovation and competition closing the digital divide and connecting the unconnected.

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