

Pipeline

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Standards: By the Book

by Tim Young

There was a time when standards, beyond proprietary, in-house standards, were unnecessary in the telecommunications world. With just a few companies controlling the entire industry, who needs interoperability or uniformity? However, the world is growing and standards are essential to manage that growth and provide a framework on which that growth can occur. Standards are, without a doubt, the cornerstone of any industry that desires to grow beyond a collection of monopolies to become a truly innovative and competitive environment.

There are a number of organizations that play with standards in the telecom space, including the IEC, ISO, ATIS, the TMForum, to a certain extent, and more. One organization dedicated to standards in the telcom space is the International Telecommunication Union (ITU). In approaching the concept of standards, we opted to take some time to speak to Reinhard Scholl, the Deputy to the Director of ITU's standardization arm – ITU-T.



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So why, exactly, is standardization necessary in the telecom space? "From the 30,000 feet view, standards are important," says Scholl. "Think of a world in which there was no definition of a meter, though I suppose in your case it would be a foot or a yard..." And, of course, one has to chuckle at this. Even the standard *standard*

isn't... standard. There's variation among even the most common and universal of standards. There's the rub.

All the same, Scholl continues, saying, "The world would collapse without standards. When I give talks, I ask what people consider the most impressive, most mind-boggling projects that mankind has ever undertaken. People may talk about the moon landing or the mapping of the human genome. But there is a project that you could arguably rank even higher, and that's the international telephone network. It's amazing that today you can make a call anywhere in the world and someone on the other end just picks up a telephone."



A Profile in Standardization.

What sorts of standards does the Geneva-based ITU-T promote? "Everything within the ICT (Information and Communications Technologies) domain," says Scholl. "Two examples: We standardized the country codes (for international calling). It's a very simple standard, but a very important standard. We also created the xdsl standard." (Though that's certainly not the full scope of ITU-T standards. Any iPod owner should be familiar with the ITU-promoted MPEG-4 format standard.)

Like many other standards bodies in the telecom space, the ITU-T is focused on the possibilities and perils associated with next-gen networks. "As telecommunications networks continue to move away from traditional circuit-switched networks and into packet-based technology, the ITU-T is tackling the problem of easing that transition," says Scholl.

Indeed, standards are arguably more essential than ever as the network changes its very nature over time. Whereas standards were once essentially about the size and shape of circuits and wires, the modern picture is much more complicated, making standards even more necessary if interconnectivity is to be a reality.

However, standards bodies like the IEC are proving that there's more to standardization than just making sure the bits and bytes reach their destination. The ITU-T is tackling a number of hot-button issues related to the telecom world, but extending beyond that narrow focus. "Recently," says Scholl, "we're putting a lot of effort into the area of climate change. ICT is a contributing factor in global

heating-up, because of all the energy used by routers and switches and computers and such.” Therefore, standardization can be the key to unifying for more sustainable energy use in the tech space. However, the ITU-T sees the role of standards in the greening of telecom as being more sweeping than that. “ICT reduces the need for unnecessary business trips. ICT can also be used beneficially to monitor climate change, using remote sensing and climate forecasting and monitoring. We just had a conference in Japan, in Kyoto, and will have a follow-up concert in London. One of the results of the first conference is that we’re working on standardization of methodologies for the analysis and quantification of greenhouse gases that can be eliminated through the use of ICTs.”

There are other issues on the table for the ITU-T, as well. “One of the other topics we’re pursuing is the topic of accessibility, as in the rights of persons with disabilities,” says Scholl. “Accessible ICT is one of the key obligations of the UN Convention on the rights of persons with disabilities. This convention has been signed by a very high number of UN member states in a very short amount of time. This makes it all the more important to promote ICT accessibility standards, and ITU has been very active in that in the past.”

Resistance?

So are standards bodies seeing resistance to standards, or are they being widely accepted?

“The problem with standards is that there are so many of them,” Scholl says. “There are some 400-500 organizations that deal with standards in the ICT space, so companies are certainly convinced of the importance of standards, and now they’re trying to shop around for the best forum.” So there is a play in the market. However, with so many companies looking around for the strongest forum, how can standards be truly universal? Won’t competition prevent that?

Not necessarily, Scholl says. “Competition among standards organizations is one aspect, but it’s complemented with cooperation. Cooperation is the key word in today’s standards world.” This cooperation, according to Scholl, is creating larger collaborations between standards bodies. “We have quite a few agreements with other forums and consortia, and there’s something we call the Global Standards Collaboration, which is comprised of national and regional standards bodies, including the ITU. There’s something called the World Standards Cooperation, which includes ITU, ISO, and IEC. There’s both friendly competition and a lot of cooperation in today’s standards world.”

However, if everyone were on board with standards, there’d be no problems. The quest for standards often gets relegated to the back burner by many companies. Why is that? “Today,” Scholl says, “it seems that companies aren’t always aware of the strategic advantage of standards. When they have to make decisions, they usually base it on how time consuming it is for someone to go to a meeting, and spend the time doing the work, and travel costs, and they don’t always look at the overall costs that you would incur by *not* participating in standards work.” And how much could standards save companies? “For the economy, overall, standards are a huge benefit,” says Scholl. “There was a study done by the German national

standards institute a few years ago that showed that the benefit of standardization was equivalent to 1% of the gross national product. Standards are as important as patents for economic growth.”

It's a lack of priority given to standards work that prohibits some companies from spending more time on them, but that's not the whole story. There are some companies that prefer to push proprietary formats in lieu of adopting standards. What does one standards body think of that? “There might be wishful thinking among companies that they might be able to push their proprietary solution to the market, but in most cases it's just that: wishful thinking,” says Scholl. “It's recognized that it's better to have a bigger cake that you share with others than to try to go with a proprietary solution.”

However, the adoption of standards, worldwide, isn't simultaneous, nor are standards given the same level of priority in every corporate culture. Scholl says the ITU-T is working on that, as well. “A key phrase in our work is 'bridging the standardization gap,' which is the gap between developed countries and developing countries with respect to the resources they are able to invest in the standardization process. Currently, most of our members come from developed countries, but there is more interest from developing countries in getting involved in addressing the standardization gap.”

Moving forward:

The benefits of standards, it seems, at least from the viewpoint of the ITU-T, are clear. They ultimately lower costs. They encourage competition. Standards bodies can use the conversation to address issues from global warming to accessibility.

However, there's an inherent problem with the entire idea of standards in the telecommunications world: If you mandate standards through a governmental or regulatory body, they sometimes threaten to become unwieldy and hinder growth and progress. Therefore, it's better, in theory, to make standards voluntary and let the market drive their creation and implementation. That's what's occurring as we speak. The ITU-T and many other bodies are all offering solutions, and the free market of ideas is sorting it all out. However, the market takes time. As dozens of standards are winnowed down to one, the rapidly changing telecommunications market is already on its way to something bigger and better.

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