



Interconnection and Interoperability

THE PRINCIPLES SET FORTH in the 1988 International Telecommunication Regulations (ITRs) have achieved much greater global significance as communication technologies have evolved to become more complex, capable and integrated into so many aspects of social and business life.

One of these fundamental principles is that of “interconnection and interoperability” — ensuring that telecommunication systems and equipment in different countries can connect and work with each other.¹ But new equipment and systems are appearing every day. Because of the ever-changing technological and operational environment, ensuring interoperability is a never-ending task.

The ITRs say that administrations or relevant private-sector operators should make agreements on providing international connectivity. And promoting interoperability is one of ITU’s strategic goals. There is consensus among the ITU membership that interoperability is of prime importance — but how to make it happen is unclear, given today’s complex mix of de jure, de facto and proprietary technical standards for systems and equipment. Even when two networks are connected, it does not guarantee that every device or service will be able to run smoothly on both.

Products need to be tested to find out whether they conform with a particular standard and so offer the expected performance in a certain environment. This “conformance testing” involves specialized tools and expertise, which are not always available in every country.² Equally complex is operational testing, which is normally the final step before a product or system is handed over for commercial use.

Numerous players are involved in determining interoperability, with differing needs and agendas. Specific capabilities need to be identified in particular players, as well as potential areas for collaboration among the many interests — public and commercial — that are involved.

The World Conference on International Telecommunications 2012 (WCIT-12), convened to review the ITRs, could be where that collaboration is strengthened.

¹ Article 1.3 of the ITRs says: “These Regulations are established with a view to facilitating global interconnection and interoperability of telecommunication facilities and to promoting the harmonious development and efficient operation of technical facilities, as well as the efficiency, usefulness and availability to the public of international telecommunication services.”

² ITU offers workshops on interoperability and training in conformance testing, and helps to establish test facilities in developing countries.