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Comment

Tackling the challenges of a digital age

For many, the origins of mass communication and the media can be traced to Mainz, Germany, where Gutenberg invented the movable type printing press in 1450, enabling wide distribution of information. It took hundreds of years and significant technological innovation to bring those first steps to the digital era.

Standardization of digital media, on the other hand, began 30 years ago with the publication in 1979 of ISO 1001, which identifies the filing structure of a magnetic tape. This standard was a partial response to business demands for the storage, transmission and accessing of vast amounts of information, a significant driving force in IT standardization.

Although this state of affairs continues, perhaps the most exciting development today is that on the Web, anyone can become a published author. Every individual, with very little investment, can compose his or her own text, photographs and videos and circulate them quickly and widely to audiences that can reach millions or even billions.

According to Adam Singer in "The Future Buzz" (a blog about marketing/PR strategies) there are approximately one trillion unique URLs in Google's index alone. And, if one were to view all of the content that was on YouTube in 2008, it would take over 412 years. Imagine the vast number of building blocks of interoperable technology that are required to create such an amazing and complex infrastructure!

When the joint technical committee ISO/IEC JTC 1, *Information technology*, was created in 1987, it brought together technical committees from ISO and the International Electrotechnical Commission (IEC), merging the expertise of both organizations to develop IT standards that would enable the widespread sharing of information. Since then, ISO/IEC JTC 1 has published approximately 2 200 standards with the active contribution of the committee's 42 participant (P) members.

ISO/IEC JTC 1 comprises 17 subcommittees, four special working groups, three study groups and one working group. With the extensive scope of the committee's work, collaboration and cooperation between subcommittees, as well as with external liaison organizations, is essential to provide users with compatibility, interoperability and a sustainable information technology infrastructure.

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In fact, beyond the difficulty of making sure that a multiplicity of hardware and software from different locations and in different languages can interoperate, it is also important to ensure "backwards compatibility" – making sure that technologies that may be considered outdated are taken into account. Why? Because in a sector where the lifespan of technology can be as short as 18 months, it is crucial to ensure the ability to migrate technology over the lifetime of the data. This creates a hectic and challenging environment, which often requires International Standards to be developed in as little as nine months.

Because it is recognized that considerable information technology work is done outside the formal standards environment, ISO/IEC JTC 1 has a process that provides a special opportunity for publicly available specifications from recognized consortia to be submitted for voting and approval as International Standards. Currently, 96 specifications have been published as International Standards under this mechanism. These standards further contribute to an integrated information technology infrastructure.

Significantly more technology than a printing press, paper and ink is required for a user to publish text or video on the Web. From user interfaces and accessibility to programming languages and coded character sets, from office equipment (Gutenberg's printer would have been standardized here!) to IT security . . . all elements are needed by even the most novice users to publish their content. The beauty of this technology, however, is that if done well, the publisher may not only find it "easy" but also intuitive.

With such a long history, ISO/IEC JTC 1 is proud to be a major contributor to this work and appreciates the opportunity to share with *ISO Focus* some of our key efforts, which you will find in the *Main Focus* of this issue.

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