Collaboration for the common good: Ecma and ISO a well matched pair of actors

by Jan W. van den Beld, Secretary-General, Ecma International

In 1961, when computer standardization lacked true notions of collaboration between bodies and even common goals, three European computer manufacturers came together and created Ecma to prevent further confusion.

Over 40 years later, its members are still making Ecma thrive by developing a variety of standards in new work areas, for subsequent submission to ISO/IEC Joint Technical Committee JTC 1, *Information Technology*. Among these new work areas are: the Universal 3D file format for the manipulation of data from the engineering world for training, marketing, maintenance and simulation; the 6 cm DVD-like optical disk, for the distribution of games for (portable) game machines/play stations; and, last but not least, the holographic versatile disks and cards (HVD & HVC). HVD's initial capacity of 200 gigabytes (due to grow to 1 terabyte), together with the high transfer speed – growing from 100 megabits per second to 1 gigabits per second – represent a quantum leap in storage possibilities.

Ecma's single purpose remains to develop and to publish international standards.

Time to market

The Information and Communication Technology & Consumer Electronics (ICT & CE) industry decides on the type of publication, the organization and the process to use for their standards. As a rule, a mix of technical, commercial/economic and political justifications exists in addition to time, money and quality constraints. Specifications from consortia and *de jure* International Standards represent two extremes.

ICT & CE standardization has special needs. Take, for instance, the short life cycles of products for magnetic and optical storage like DVD, which dictate the development times of standards. Less than a year is perfectly common in Ecma. In addition, software standardization requires an iterative process, much akin to that of the release of software products; it is impossible to develop a complete and long-standing standard "in a single run".

Truly global ISO and IEC standards – when timely – are not only important for industry and manufacturing, but also for users, such as in public purchasing, and for conformance testing.

Mutually beneficial

Although ISO, IEC, JTC 1 (and its predecessor, ISO/TC 97) and Ecma have always enjoyed a natural symbiosis to mutual benefit, their field of action, structure and working methods are very different:

Ecma focuses on ICT & CE, while ISO and IEC have far broader scopes, with many very different work areas. Although ISO/IEC JTC 1's work area is information technology, its scope is broader than Ecma's.

ISO technical committees work through national bodies, whilst Ecma works directly with industrial companies and not-for-profit organizations such as universities and governmental institutes. The ISO five-stage process first uses national and then international consensus building, whereas Ecma's members enjoy direct participation in a three-stage process.

In the mid-1980s, ISO and IEC created the fast-track procedure based on a proposal by Ecma. After being vetted in Ecma, the standards go through a meticulous international process within JTC 1 ("more eyes always see more") to ensure quality. Ecma submitted over 80 % of the 250 fast-track proposals to

About the author

Jan van den Beld, born in the Netherlands in 1938, worked almost 25 years for Philips, after having graduated in physics at the University of Delft. He worked in six different positions, including the development and design of system software, followed by consulting and promoting software solutions within Philips on a global scale. In later years he became the principal representative of Philips in Ecma and in ISO/IEC JTC 1 via NNI. After having become President of Ecma in 1990, he became its second Secretary General, in Geneva, at the beginning of 1992.

Membership and structure

Ecma has four categories of company members with annual fees of 100, 50, 25 and 5 % of unit value (70 000 Swiss Francs) which pay for the budget, while a reserve fund absorbs unexpected changes.

Its structure consists of two levels: the General Assembly (GA) and the Technical Committees (TCs). The GA is responsible for publications, IPR (Intellectual Property Rights), relationships with other organizations, political lobbying with respect to standards (related to environmental issues and product safety), public relations, financing, membership, by-laws and rules. The GA uses both qualified votes, such as for approval of publications (which amount to 450 as of today), and simple majority votes, such as for creation of a TC. The TCs, on the other hand, are responsible for the development of standards and technical reports.

Ecma's process ensures quality and speed. Its members and its five-person secretariat proactively pursue acquisition of new work. The Ecma process consists of three stages:

- The GA approves and allocates new areas of work to new TCs, while TCs approve work items within their scopes directly.

- The development of final drafts is under the full responsibility of a TC, which balances quality with speed, using Ecma's principle of "better a good standard today than a perfect one tomorrow!". The TCs almost always work on the principle of consensus, but they can use a simple majority vote. Each member has one vote, regardless of the size of the organization.

- The GA approves the final drafts for publication as a standard or a technical report.

ISO and IEC, only one of which failed. To facilitate publication, the structure given to the ISO and Ecma standards is very similar.

"Better a good standard today than a perfect one tomorrow!"

Thus, Ecma acts as a "subcontractor" to ISO and IEC, in particular to ISO/IEC JTC 1. Ecma's A-liaison with JTC 1 is based upon the long-standing trust relationship and mutual recognition between them so that, despite differences in methods and structures, industry values both JTC 1 and Ecma to attain the goal of timely International Standards.

Value added

The creation of more than 400 consortia proves that high-tech industry needs control. Ecma and consortia, often sharing several members, are complementary.

Ecma allies the agility of consortia with the quality of the *de jure* standardization organizations. By combining its efficient infrastructure and proven flexible working methods with well established interfaces to ISO, IEC and ITU-T as well as to CEN (European Committee for Standardization), CENELEC (European Committee for Electrotechnical Standardization) and ETSI (the European Telecommunications Standards Institute), Ecma ensures its strong position in the area of ICT & CE standardization. ■