Position paper on "How far harmonization?"

R. Hotaka
University of Tsukuba
1-1-1 Tennodai Tsukuba Ibaraki 305, Japan
Phone: +81-298-535087, Fax: +81-298-535070,
E-mail: hotaka@shako.sk.tsukuba.ac.jp

1 PAST ACTIVITIES (OF JAPAN) CONCERNING CSMF

The ISO standardization project "Conceptual Schema" ended in 1987 after publishing "TR9007: Concepts and terminology for the conceptual schema". That was a technical report and was not an International Standard.

Even though the project "Conceptual Schema" did not publish a standard, the panelist recognized the importance of sharing and exchanging application schemas and anticipated the standardization of a conceptual schema modelling facility again because the standardization of data modelling facilities is necessary before sharing of application schemas can be accomplished.

He persuaded the domestic standardization organization to establish a committee to prepare a CSMF specification and the development work started in 1988. In its original intent, the committee was to propose a data model standard to ISO after the stabilization of the specification in Japan.

Independent from the activities of Japan, another activity for establishing a new CSMF project called X3T2 came from the USA in 1989. The charter of the committee X3T2 then was data interchange.

Stimulated by the US activity, Japan proposed the then prepared CSMF specification (JDMF) to 1989 ISO SC21 Florence meeting.

The establishment of a CSMF project confronted a lot of difficulties. During the preparation of the project, the panelist helped JTC1 (Joint Technical Committee 1 is a joint committee of ISO and IEC chartered to manage Information Processing) produce the document "JTC1 N1756: Request for Review and Comment on the JTC 1/SC 21 Recommended Action to Address Problems of Data Modelling Standards Coordination (JTC 1/SC 21 N 6614)". It was circulated among national bodies to call attention to the importance of the standardization of a data model.

Finally, in 1994, the Conceptual Schema Modelling Facility (CSMF) project was established in ISO/IEC JTC 1/SC 21/WG 3 and is now working.

2 CURRENT SCHEDULE OF THE CSMF PROJECT

The current schedule of the CSMF project is as follows:

1995 7	WD (Working Draft)
1996 7	CD (Committee Draft)
1997 7	DIS (Draft International Standard)
1998 7	IS (International Standard)

3 CURRENT MAJOR PROPOSALS OF CSMF

The major proposal for a CSMF include a specification based on FOL (First Order Logic) and the object-oriented paradigm.

4 PANELIST'S OPINION ON "HOW FAR HARMONIZATION?"

There are two kinds of data: the one that requires sharing and the other that does not require sharing. The panelist thinks that for sharing data, standardization is the most natural and fair way to share accumulated knowledge and to promote productivity of information system development.

Since data modelling issues are very delicate and require a lot of time to investigate and understand, it is imperative to discuss written contributions from multiple national bodies publicly and repeatedly. It is the opinion of the panelist that CSMFs or data models proposed in the academic society have never been discussed in this way.

There are matters that can not be harmonized theoretically or unanimously. They should be resolved by detailed discussions and finally by voting procedures as described in the ISO directives.

5 PROBLEMS OF STANDARDIZATION

In reality, the standardization is not so simple. There are many so-called *standardization* activities both in and outside of the ISO/IEC organization. For example, the following projects have related activities with respect to data models or a CSMF:

Standardization in ISO :

ISO/IEC JTC 1/SC 21/WG3 CSMF
ISO/IEC JTC 1/SC 21/WG4 Directory
ISO/IEC JTC 1/SC 21/WG4 Object-oriented model
ISO/IEC JTC 1/SC 21/WG7 Open Distributed Processing

Standardization outside ISO (aiming for a de-facto standard):

OMG (Object Management Group) a consortium

Harmonization of these activities still remains an open question.