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Report on WG 7 Hypermedia trial

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March 14, 2001

Mandate

This report is written as a result of Resolution 610 of JTC 1/SC 7 and discussions at the WG 7 meeting in Perth October 29, 2000 to November 2, 2000.

Hypermedia Trial

610.	JTC1/JTC 1/SC7 agree to trial novel hypermedia based approaches to package and distribute its technical work products. Consequently, study groups are created within its WG 2, 6, 7 and 10 to experiment with the technology and report back to JTC 1/SC7 by 2001-03-01.

Hypermedia trial

WG 7 discussed the concept and provided the following opinions as to the approach that could be taken:

Table 1 - Hypermedia trial considerations

Aspect	Decision
Link to the cover of the referenced document?	No
Link to the referenced Sub-clause?	Yes
If yes, the document would need to be partitioned e.g. by process for 15288 (Level 3)	
Use colour?	Yes
Use generally available tools?	Yes
They must not cause maintenance difficulties.	
What is the minimum browser capability that will be required?	TBA

Anatol Kark agreed to experiment and report back to the Convenor by 1 Feb 2001

Introduction

I have discussed the business case of the publishing of SC7 standards using web as a media with SC 7 Secretariat as well as U.S.A Head of Delegation - Mr. James Moore. There was a consensus that standards produced by SC 7 need to be distributed as widely as possible, that the issue of charging for the documents should be a secondary issue, and that some versions of hypermedia documents would be an ideal media. The ISO Director, Standards Publishing, Ms. Joanna Goodwin, who maintained that National Bodies would oppose such distribution, did not share that opinion. As of the time of writing (March 13, 2001) I am still in discussion with Ms. Goodwin as to the intentions of ISO with respect to web distribution of standards.

From the above constraints and recommendations I considered "use of generally available tools" as the most important. That meant for me that none (or very little) hand manipulation of format resulting from the conversion should be necessary.

PDF

Adobe's Portable Document Format does not necessarily fit in the model of the Web distribution, however Adobe Distiller 4.0 together with Word 97 or later, appear to have a facility to generate fully cross-referenced PDF files. This technology, together with Adobe's Content Server 2.0 would allow a distribution of standards for fee, over the net and have the flexibility of hypertext. However, despite numerous attempts I was not successful in generating such a PDF file either from Word 97 or Word 2000. I will continue the investigations in this direction.

HTML

I have attempted to use Word 97 to create HTML, which could be then "touched up" to create a final version. Unfortunately, that version of Word produced what could be at best called an ugly HTML. That led me to a survey of existing tools that would perform that conversion job better. I have selected a program called R2Net from Logictran Inc. (www.logictran.com). This program converts a Word RTF to HTML in very efficient manner. It is very flexible as most of its functionality is control-files driven. It allows production of Cascading Style Sheets (CSS) based on Word Styles, produces separate HTML Index file and can produce cross-linking.

I am attaching the preliminary translation of two documents: PDAM3 of ISO/IEC 12207 and a CD of ISO/IEC 15939. Neither of these two translations were touched up by me. The results are very promising, but they indicate that the authors must strictly adhere to the Word template.

Word 2000 can produce a Microsoft version of HTML directly. That version can be read by Netscape browsers but it takes advantage by Microsoft Internet Explorer5. It provides a very good rendition but does not do any cross-linking.

XML (SGML…)

Word 2000 as well as Logictran can produce XML. I am attaching ISO/IEC 15939 translated to XML using DocBook as a DTD. I think that in the long run XML is a proper way to go, but it will require generation of Standard's specific DTD. It will enable much more flexible processing, linking and distribution of the standards. There are a number of word processors (WordPerfect 2000, Xmetal – which is specifically an XML/SGML editor), which natively support XML. There are flexible tools (Commercial, open source and free), which facilitate generation of DTDs. The support for XSL, which is needed for the presentation, is not yet as prevalent.

Conclusions and recommendations

Experiments carried out so far confirm that it is possible to generate standards directly from Word documents. The ease and correctness of that process is predicated on a strict use of ISO template. (or any template that we choose)

I will carry out further experiments and discuss some of the aspects of the conversions with authors of Logictran, who up to now have been very helpful. I will provide a set of control files for R2Net to produce much more comprehensive hypertext.

I also recommend that we continue the experimentation with multi-part standards (like ISO/IEC 9126 or ISO/IEC 15504), which I have not attempted to do so far. One should be able to pass the converter multiple documents and it will convert them in isolation. However, since pretty much everything that happens in the translator is controlled by textual 'translation files' it is relatively easy to build up cross-reference files, common TOC's, etc. Of course, if file A directly references file B, a suitable link can be planted automatically.

I do not consider the issue of supported browsers as very important. R2Net can generate HTML3, HTML 4, XHTML or XML. Either Netscape version 4.7x or IE5 do render the results of translation correctly. I have not experimented with Netscape 6. XML will become browsing standard "shortly" and browsers will have to support it.