TRINIDAD AND TOBAGO
COMPUTER SOCIETY

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Trinidad and Tobago Bureau of Standards (TTBS)
1-2 Century Drive
Trincity Industrial Estate, Macoya
Trinidad and Tobago, West Indies

Re : TTCS recommendation regarding TTBS vote on DIS29500

Summary : The TTCS recommends that the TTBS does not change its abstain vote on DIS29500.

For the attention of the Trinidad and Tobago Bureau of Standards (TTBS) :

Dear Sir/Madam :

As a member of the Trinidad and Tobago Bureau of Standards Information Technology Committee, the Trinidad and Tobago Computer Society (TTCS: http://ttcsweb.org/) is submitting its recommendation on DIS29500 (http://www.ttcsweb.org/DIS29500).

This document contains observations based on the proposed criteria, general observations and a recommendation for the TTBS.

Open Life-Cycle

> *"A format development process having an open life-cycle means the format is evolved in a fashion that is open to public and where all participants, individuals as well as companies, have a voice in consensus decision-making on the standard's technical make-up. An open standard should be platform and vendor-neutral. Multiple implementors working on multiple platforms is essential."*

Office Open XML did not evolve in the open as per this criteria. It originated within Microsoft, a private company. The format was conceived and refined within Microsoft with no public participation on its technical make-up. It was then submitted to ECMA, a private, membership based organisation whose members worked on the format behind closed doors. ECMA then published Office Open XML to the public as a ready-to-use format via a 6,000 page specification document. It is only now, during the attempt to have it ratified as an ISO standard that National Standards Bodies in ISO/IEC SC34 are able to have some say in the technical make-up of the format.

OpenDocument Format (ODF) is more open in the sense that OASIS (http://www.oasis-open.org/), the committee responsible for ODF, posts proposed specifications for public comment on its website. Their mailing lists where proposed standards are discussed, the comments received from the public and minutes of their meetings are publicly available on its website.

However, it should be noted that many standards are not usually developed in "*a fashion that is open to public and where all participants, individuals as well as companies, have a voice in consensus decision-making on the standard's technical make-up*". Many standards developed at ISO for example, are not directly open to the public for comment.

Open Availability

> *"An open format is published in its entirety in a specification document which is freely available and easy to comprehend. Open Availability also means that a format is freely available for implementation in software."*

The term “easy to comprehend” is subjective given the highly technical nature and the length of the specification.

A specification that requires 6,000 pages to explain its nature is not a trivial matter to implement. Some of the National Bodies comments for DIS29500 stated that DIS29500 was too dependent upon knowledge of Microsoft Office functionality and its various legacy formats. A proper implementation of DIS29500 would therefore require intimate knowledge of both the Microsoft Office application and the legacy formats. At the time DIS29500 was submitted for the September 2007 ballot, such information was not available to third party implementers. ECMA and Microsoft responded to these concerns by making the specification to the legacy binary formats under a Open Specification License in mid-February 2008 (almost 5 months later).

However, open availability alone does not make it easier to comprehend the specification. An example of this can be found in the following quote from Joel Spolsky, a software developer and a former program manager for Microsoft Excel. The name of the article is: "Why are the Microsoft Office file formats so complicated? (And some workarounds)" (it can be viewed at: http://www.joelonsoftware.com/items/2008/02/19.html). In this article he speaks about the complexity of the legacy binary Microsoft formats :

> *"A lot of the complexities in these file formats reflect features that are old, complicated, unloved, and rarely used. They’re still in the file format for backwards compatibility, and because it doesn’t cost anything for Microsoft to leave the code around. But if you really want to do a thorough and complete job of parsing and writing these file formats, you have to redo all that work that some intern did at Microsoft 15 years ago. The bottom line is that there are* ***thousands of developer years*** *of work that went into the current versions of Word and*

> *Excel, and if you really want to clone those applications completely, you're going to have to do thousands of years of work. A file format is just a concise summary of all the features an application supports."*

Multiple Implementations

> *"An open document format can and will be designed in to many different software applications without practical, technical, legal or other impediments.*
>
> *From a different perspective it is fair to say that an open format has the characteristics that attract multiple implementations. If one had no other way to tell, the format specification with the greater number of complete implementations likely follows open principles more rigorously and will better deliver information free-flow between applications and platforms."*

ECMA is supposed to be the entity in charge of the specification (and possibly would be custodian should DIS29500 becomes an ISO standard), however it is Microsoft (not ECMA) that first offered the covenant not-to-sue pledge and then the Open Specification Promise (OSP ; http://www.microsoft.com/interop/osp/default.mspx). The entity that can sue you (Microsoft) is thus the one implementers of the specification have to be concerned with.

The Open Specification Promise applies specifically to the Office Open XML 1.0 (the version that ECMA submitted to ISO for the September 2007 ballot). It is not clear whether this applies to future versions of the Office Open XML standard. There exists a possibility that Microsoft could impose a different form of licensing upon future Office Open XML versions. There has been instances where patent owners of a particular method/algorithm/storage have sued patent violators after such method/storage/algorithm was in widespread use. Some of the instances are:

- Forgent Networks and JPEG format (http://en.wikipedia.org/wiki/JPEG)
- Unisys and the GIF format (http://en.wikipedia.org/wiki/Graphics_Interchange_Format)
- Eolas patent on browser plugins against Microsoft (http://en.wikipedia.org/wiki/EOLAS)

Interoperability Across Different Systems

> *"Perfect interoperability across different systems means a format can be fully implemented in any application, regardless of the platform or system on which that application operates. Every respective system would be able to access a document's content and layout parameters to provide perfect document fidelity to the original.*
>
> *While neither ODF or OOXML offers perfect interoperability, we can judge each one's performance based on its proximity to perfection as well as its potential to reach a high practical level of interoperability for business processes. It is sufficient that an open document format should be easily read, authored and edited from within different system environments and across different applications. Content should be transmitted without loss and presentation layout should be rendered with fidelity by alternative applications operating on different platforms."*

The ECMA disposition of comments has listed several implementations as proof that DIS29500 is inter-operable. However, these implementations use Office 2007 formats as specified by Microsoft when Office 2007 was released in January 2007. They are not the final DIS29500. It is not clear when Microsoft Office 2007 will be updated to reflect the final version DIS29500 if it is approved by ISO.

Many of the implementations are not full-fledged implementations. They do not offer full read and write compatibility with Open XML. For example: the Apple iPhone support for .docx is read only. Apple iWorks 2008 can partially import .docx,.xlsx, .pptx - it cannot save to those file formats. Whether this is due to the newness of the specification or to possible complications in implementing the specification, it is difficult to say.

It is important to note that Microsoft Office is the dominant office suite and third party applications have to possess a high degree of compatibility with whatever formats are currently supported by Microsoft (the binary legacy Office formats and now Open XML), otherwise such third party applications will not be used. Now that the file formats for Office 2007 are becoming more prevalent, third parties are driven to include compatibility with the

OOXML format just has they had to with previous Microsoft Office formats. Therefore, the number of implementations of OOXML may not necessarily be a reflection of the support for the standard.

General observations about DIS29500

Given its February 2008 expressions of interoperability (see http://www.microsoft.com/presspass/presskits/interoperability/default.mspx) and that it has released the binary legacy Office formats under the OSP (also in February 2008), it is unfortunate that Microsoft would choose to introduce a new format (Open XML) instead of working with the relevant committee (of which Microsoft is a member) for ODF to make a single document standard for document exchange.

There are complaints that ODF was/is not a suitable format. It should be noted that several existing applications (for example: OpenOffice.org) can translate with great fidelity (if not with 100% perfection) legacy Microsoft binary formats to ODF and vice-versa.

Microsoft has made repeated comparisons that Open XML vs ODF gives consumers choice (which is good) as to which format to use - just as how you can choose to drive cars made by different manufacturers. But given that the formats deal with the exchange of data, standards like Open XML and ODF are more like the roads that you travel on. Because the road is standardised, this allows choice of consumer vehicles that can use the same road. A road "paved" with Open XML and a road "paved" with ODF will have different characteristics which means that cars (applications) built to handle one road (say ODF) may not be able to handle the other road (say Open XML) without modifications to the car which may not be practical to implement. If such a system existed, "cars" may not be able to reach "destinations" if "destinations" did not support both roads. End users who exchange the default file formats that their choice of application produces will encounter problems with users of different applications.

An historic occasion to have one unified standard to handle document exchange to benefit all end users now and for the future appears to have been lost. Nevertheless, DIS29500 is indeed, a significant step forward for Microsoft however more time is needed if it wishes to implement and support a second standard.

The apparent rush to have ISO/IEC members in SC34 to vote approval of DIS29500 in September 2007 on such a lengthy and complex specification is difficult to understand. DIS29500 was finalised in December 2006, meaning that there wasn't a significant number of documents in the new format (compared to legacy Microsoft binary formats) or mature third party implementations save for Microsoft Office 2007 released in January 2007. In spite of this, many national bodies made great efforts to comment on DIS29500 which ECMA has tried to reconcile with its proposed dispositions in January 2008. Many of these dispositions do appear to improve the specification from September 2007.

There have been conflicting reports from the Ballot Resolution Meeting. An example is the Malaysian Department of Standards press release of what happened at the BRM (http://www.standardsmalaysia.gov.my/press%20release%204%20March%202008.pdf) which raised questions about the ability of such a process to properly evaluate such a large number of technical issues in such a short period of time. Although the official results of the BRM showed that 98.44 % of the responses have been accepted, there have been some reports by both delegates and standards bodies that the issues were not discussed as thoroughly as they should have been. It should be noted that many of the comments may be biased but the disparity of the experiences at the BRM does show some cause for concern.

Recommendation for TTBS for DIS29500

The TTBS should look at the purpose and objectives of ISO/IEC JTC1 SC34 which the TTBS voluntarily joined in mid-2007.

From the ISO/IEC JTC1/SC 34 website (http://www.jtc1sc34.org/) :

> *"**ISO/IEC JTC 1/SC 34** is the international standardization subcommittee for Document Description and Processing Languages standards and technical reports related to structured markup languages (specifically the Standard Generalized Markup Language (SGML) and the Extensible Markup Language (XML)) in the areas of information description, processing and association.*
> *...*
> ***The SCOPE of this committee is :** Standardization in the field of document structures, languages and related facilities for the description and processing of compound and hypermedia documents, including :*
>
> - *languages for describing document logical structures and their support facilities*
> - *languages for describing document-like objects in web environments*
> - *document processing architecture and formatting for logical documents*
> - *languages for describing interactive documents*
> - *multilingual font information interchange and related services*
> - *final-form document architecture and page information interchange*
> - *hypermedia document structuring language and application resources*
> - *API's for document processing"*

An "approve" or "disapprove" vote on DIS29500 will mean that the Trinidad and Tobago Bureau of Standards has the technical capability to analyse a complex specification such as DIS29500 (6,000 page specification, 3,000 plus comments from other National Bodies, 2,000 page disposition of National Bodies comments and the text from the outcome of the BRM).

Has the TTBS subjected DIS29500 to the same level of technical scrutiny as the other National Bodies which provided many comments in support of and against DIS29500 in the September 2007 ballot? A vote in standards in SC34 is a vote equal to those national bodies who have put in significant time and effort in analysing a specification. It would be an injustice for TTBS to cast a ballot with insufficient technical review, either for yes or for no.

Furthermore, the TTBS has not cast any votes on other ballots in SC34. The proposed standards on these ballots, although technical in nature, are not as complex as DIS29500, yet the TTBS was not able to analyse and vote on them. A change in voting position on DIS29500 will mean that the TTBS is capable of understanding, analysing and voting on other ballots in SC34.

A change in the voting position for DIS29500 can easily expose the Trinidad and Tobago Bureau of Standards to accusations of joining SC34 for the sole purpose of voting on DIS29500. Such speculation will only be reinforced by the fact that the TTBS has not cast any votes on other ballots in SC34.

According to the ISO/IEC JTC1/SC34 directives, 5th edition (available at http://www.jtc1sc34.org/repository/0725.pdf) :

> *" 3.1.1 P-members of JTC 1 and its SCs have an obligation to take an active part in the work of JTC 1 or the SC and to attend meetings. P-members of JTC 1 and its SCs have an obligation to vote approval, disapproval, or declared abstention within the time limits laid down on all questions submitted for voting (unless 3.1.2 applies) within JTC 1 or the SC.* ***"Abstention" is an appropriate response (with or without comment) if an NB is not confident that their technical review is sufficient to cast an "approve" or "disapprove" vote****. P-members of JTC 1 have an obligation to vote on FDISs prepared by JTC 1 or its SCs as well as DISs distributed for fast-track processing."*

Given the above, **the Trinidad and Tobago Computer Society recommends that the Trinidad and Tobago Bureau of Standards does not change its abstain vote on DIS29500 from September 2007**.

There may be claims that an "abstain" vote is "bad" for Trinidad and Tobago. **This is not the case**. An "abstain" vote does not prevent :

- local IT persons creating applications to use these formats.
- local IT vendors from promoting use of the format to their clients.
- citizens from using the formats or applications that support them.
- local companies from using the formats or applications that support them.
- local schools and training institutions from teaching/training people to use applications which support these formats.

An "abstain" vote means that the entity voting in that manner was unable to conduct a proper technical review in the allotted time. It does not prevent Open XML becoming an ISO standard in the future after a more thorough technical review and will not "kill" Open XML since the standard is supported by Microsoft and is used by default in their latest suite of applications.

In the local context, a proper technical review was not possible due to insufficient time created by the fast track process and the lack of suitable local technical experts to conduct the actual review. Persons with the skill to review DIS29500 may have been available but they were not free of influence from competing interests and were therefore not appropriate for the review. These are/were the limitations faced by the Trinidad and Tobago Bureau of Standards Information Technology Committee.

If any fast tracked standard of this complexity which went through a BRM resulted in insufficient technical review by the TTBS, it would still be best for the TTBS to abstain.