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Title: **STF169: Encoding Control For ASN.1**
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Abstract:

This document summarizes the current status of work on DTS/MTS-00068, "Specification of ASN.1 Encoding Control Notation (ECN)" within STF169. It is not one of the scheduled STF Progress Reports. It is, rather, an informal view of what has been achieved and what is still to be done.

Introduction

The Encoding Control Notation, ECN, for ASN.1 allows users to specify data encoding rules which are specific to their projects and tailored to the environment within which the ASN.1 is to be used. Work on developing this notation has been going on within Study Group 7 of ITU-T for over a year. Given the importance of ECN to the efficient encoding of data units in any air interface protocol and UMTS in particular, TC-MTS undertook to assist in the development of ECN through the Funded Work Programme and in the summer of 2000, STF169 was established. Its task was to facilitate the ongoing development of ECN and to publish an ETSI standard early in 2001 – in advance of the ITU-T Recommendation (X.692) and its equivalent International Standard (ISO/IEC 8825-3).

Progress in 2000

Despite the fact that there were some significant misunderstandings between the those members of STF169 who were active members of the SG7 ASN.1 Group and those who were not, progress during most of 2000 was reasonably close to schedule. The misunderstandings stemmed primarily from two issues. Firstly, there was a lack of comprehension of the huge amount of work that had already taken place within the ASN.1 Group. Secondly, the Work Item for the deliverable from STF169 had been wrongly entered in the ETSI Work Programme as a draft EN and this would have competed directly with X.692 and ISO/IEC 8825-3. This second issue was resolved quite easily by reclassifying the deliverable as a TS which would require no Public Enquiry (or even a Member Vote) and would have a strictly limited lifetime of 1 year (approximately the time it would take for the draft to work its way through the ITU-T and ISO approval and publication cycle). The first issue, although more difficult to deal with, was resolved over time as a closer working relationship developed.

The experts who took part in STF169 during 2000 were as follows:

Anthony Wiles – Leader
John Larmouth
Jon Stromme
Olivier Dubuisson
Markku Turunen
Steve Randall
Frank Schramm
Jean-Paul Lemaire

A number of STF session were held during 2000 and a 1-day workshop on ECN was held in Sophia Antipolis during December. At this point it was planned that the draft X.692 would have been stable enough for it to be processed into the ETSI format ready for publication as a TS at the end of January 2001.

Progress in 2001

An STF169 Steering Group meeting in Paris in November 2000 decided that the unused effort available in STF169 (approximately 2 months) should be allocated to the task of reformatting the

ITU-T/ISO draft text into a suitable style for publication as an ETSI TS and for promoting the use of ECN within other ETSI TBs.

Although a version of the draft was processed into the ETSI style in January, this was not considered to be complete enough to be published, especially as a new draft was due in February. The January document was circulated to TC-MTS for their review on the understanding that a further draft would be available for approval as the TS by the middle of February.

At this point, the schedule began to disintegrate. Concerns were raised about the stability of the current ITU/ISO text and many participants in the work, including members of the STF and the Steering Group, felt that it would be dangerous to publish anything at that stage, even with the introductory "Warning" paragraph that had been inserted to inform readers:

- a) that the standard was likely to change; and
- b) how the standard was likely to change.

Outside STF169, the ASN.1 group within ITU-T Study Group 7 decided that the document should not go forward for consent because it was not stable enough. It is worth pointing out here that the core text of X.692 is very stable and is unlikely to change in essence. The perception of instability comes from the fact that the authors expect to have to make changes to the keywords. Clearly, it would not be sensible to publish such a document, even as a TS.

The ISO/IEC 8825-3 Rapporteur (John Larmouth) and Editor (Paul Thorpe) have undertaken to provide text which is stable enough to be processed and published as an ETSI TS by 15th March 2001. If they are able to achieve this and if the X.692 Rapporteur (Olivier Dubuisson) agrees, the TS should be made available for TC-MTS review by 30th March with approval and publication following at the end of April. If, for some reason, this approach proves to be impossible, it is unlikely that the TS will be published before September 2001, 9 months later than originally planned.

One further obstacle may be placed in the path of progress by the ETSI Secretariat itself. As there is, as yet, no MoU between ETSI and ISO, the Secretariat is unwilling to have direct references to ISO standards in ETSI deliverables where this can be avoided or to imply that a deliverable is derived from an IS. As the current text of the ECN standard makes joint references to ISO standards and their equivalent ITU-T recommendations (e.g. "*ITU-T Rec. X.680 / ISO/IEC 8824-1*"), each such reference (including the document title which identifies the TS as being equivalent to "*ITU-T Recommendation X.692 / ISO/IEC 8825-3*") would need to be modified to remove the ISO/IEC standard document number. Understandably, the authors of X.692/ISO/IEC 8825-3 have expressed some concerns about this.

The Next Steps

During 2001, the most important task is to get ETSI ECN TS (DTS/MTS-00068) published as soon as it is reasonably possible. Close behind this in terms of priority is the task of promoting the use of ECN within other ETSI TBs, particularly those that are involved in protocols that require better efficiency or more flexibility than the existing fixed encoding rules (BER, PER etc.) permit. There are still STF169 resources for this activity but assistance from the members of TC-MTS would be welcome in the following areas:

- identifying which TBs might be interested in ECN
- increasing the awareness of ECN within those TBs
- identifying ways for TC-MTS to provide assistance to those TBs that require it