

The Digital Network

TDN Response to DCMS Consultation on DTT Ancillary Services

Introduction

The Digital Network (TDN) represents the BBC, Digital 3and4 (ITV and Channel 4), Ondigital and SDN on matters of common interest relating to Digital Terrestrial Television (DTT).

This TDN response to the DCMS consultation on DTT ancillary services concentrates on technical aspects of the issues. Individual TDN members will also be responding, as programme providers, on content and channel specific issues.

1. TDN welcomes the opportunity to contribute to the DCMS review of the Provision of Subtitling, Sign Language and Audio Description on Digital Terrestrial Television.
2. TDN has been actively pursuing appropriate technical, operational and cost effective solutions for the provision of Ancillary Services since before the launch of DTT.
3. Subtitling is fully operational and providing a service to meet the required quotas and Audio Description is now available as a pilot service, with full availability only a few months away.
4. The original intention to launch closed signing services using a bandwidth efficient solution, such as the ITC's humanoid "Simon", have run into serious difficulties as a result of which signing is currently being provided in an open format.

Background

Subtitling

All DTT services include a subtitling service which uses the ITC's mandated technical solution and have been working successfully since launch. In general, quota requirements are being exceeded.

Recommendation

The current targets are appropriate.

Audio Description

TDN members have invested large sums of money in the development and production tooling of a plug-in Audio Description module. Unfortunately the availability of this module has been delayed by difficulties in manufacture but, in the meanwhile, a pilot service has been launched using alternative reception techniques. The RNIB has nominated some of their members to be trialists and valuable experience is being gained for both broadcaster and user. It is expected that first supplies of the plug-in module will be available in February 2001.

Recommendation

It is not appropriate to increase the volume of Audio Described services until the RNIB has arranged that AD modules are commercially available. Nor is it appropriate to increase the target quotas until there is clear evidence of the level of take-up by the visually impaired.

Signing

Unlike other broadcast delivery platforms DTT is very bandwidth-restricted and, in order to achieve a sensible balance between the technical and functional quality of the various service elements within a multiplex, it is vital to choose the right, bandwidth-efficient technologies. It is to broadcasters and deaf viewers alike that the benefits of a "closed" signing system accrue and, from an early stage, it had been assumed that the ITC's development of a "humanoid" graphical signer, then known as "Simon", would provide the efficient solution needed. Unfortunately early demonstrations of this approach did not impress the potential users and other possibilities had to be considered in an attempt to meet the licence requirements for launch date and quotas.

MPEG2 digital compression is a current technology and could be used to deliver the image of the Signer to the TV set but suffers the disadvantage of being in-efficient in bandwidth terms for this purpose. If closed signing using MPEG2 was adopted as a means of purely meeting the short term licence obligations, there would be serious implications for the future in that the quantity of signing possible and scheduling freedom of signed programmes carried within a multiplex would be significantly constrained. The likely result would be that very few peak time programmes could ever be signed and that the ultimate volume of signed programmes would have to remain very low.

MPEG4 is a more advanced compression technology which has the potential to reduce the bandwidth required to carry the signing image by perhaps 40%. However this technology is only in the laboratory at the moment and no practical equipment is available for either the broadcaster or user and neither will it be for at least eighteen months.

TDN has continued its search for a satisfactory solution and has recently discovered that the ITC has continued its work on Humanoid or Virtual Signers as the lead organisation in a European collaborative project called VISICAST. This project is developing a graphical signing system which will have wide application in various everyday situations where communication for deaf people is difficult and sometimes impossible. Its use is envisaged at railway booking counters, post offices in many other retail situations. There is indeed an argument in favour of television signing being consistent with what will be widely used in other places. Progress in this project has been good and already a much improved humanoid signing system has been demonstrated to TDN members. This new system is remarkably bandwidth-efficient needing less than 30kBit/S to deliver a good quality image. This bandwidth is less than 10% of that required for an MPEG2 system and, if adopted, would effectively remove the technical constraints on the volume and scheduling issues.

It is of significant importance that the RNID is a member of the VISICAST project and should mean that the needs of deaf users are being properly represented and understood.

It is anticipated that the computing power and memory availability in some set top boxes will be sufficient to run the necessary software to decode and display the Signer images and this represents an attractive proposition for potential users. However, the size of the UK market in isolation may not prove sufficient to drive receiver technology in this direction or at an acceptable pace. Manufacturers may need to look to a European market to provide the volumes necessary for economic viability.

Due to the unexpectedly slow development of suitable technology for digital television signing, TDN members have reluctantly introduced "Open" signing in order to meet the current 1% quota requirement. However, even at this low level, some TDN members have received an adverse reaction from the normally hearing public to the enforced presence of the Signer on their TV screens. It is unfortunate, but at the moment, the only advice that can be given to such viewers is to switch back to analogue reception!

Recommendation

Given the need for a satisfactory long term closed signing system, and one which does not restrict the quantity or scheduling of signed programmes, it is TDN's recommendation that open signing be held at the 1% level to allow sufficient time for a good and lasting solution to be implemented. There will be substantial legacy problems if the best solution is not adopted from the beginning. Further work is required in order to propose a new timescale but present indications are that a delay of at least eighteen months is required before closed signing can be properly implemented. Following the eventual introduction of closed

signing, it should be possible to ramp up the volume of signed programmes quite quickly and the government's original target of 5% by the tenth year should still be achievable.

General Overview

TDN has invested considerable resources and finance to the development of technical solutions for the delivery and reception of audio description and closed signing services. This work continues, but TDN's involvement will cease at the end of the development processes. It is for other relevant sectors to support the production and distribution of domestic equipment incorporating the developed solutions together with the necessary ongoing customer services. In order to underpin the production and distribution phases and to avoid unnecessary delay Government should urgently commission work to identify the real level of the markets for these products.