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Study Group 15 **Version 1**
Experts Group for Video Coding and Systems in ATM and Other Network Environments **13-15 July 1994, Grimstad**

Title: **Report on preliminary experiments using H.320 codecs over ATM networks**
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1. Introduction

This document reports on connecting existing H.320 codecs to ATM networks. The object of the tests was to establish how easy it is to interface existing codecs with an ATM network and perform informal subject assessment of the quality of the connection.

2. Configuration details

The test configuration is shown in Figure 1 and consists of two BT VC2300 H.320 video codecs with cameras, monitors and audio facilities, each connected to an Alcatel A1000 ATM cross-connect switch. One ATM switch is sited at BT Laboratories (Ipswich), the other switch being located in London. Both switches are interconnected by a 34Mbit/s PDH link conveying ATM cells.

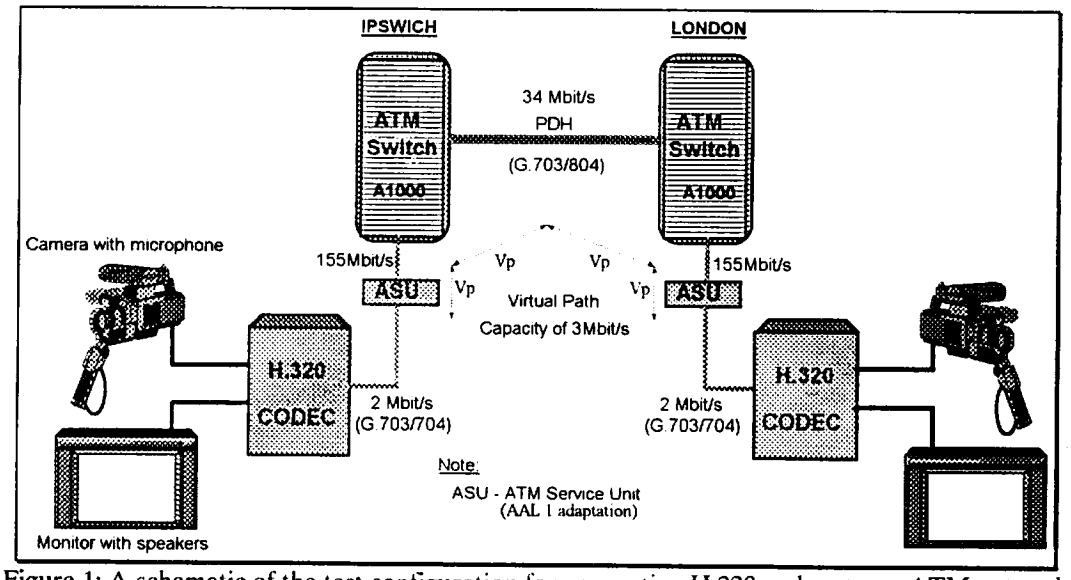

Figure 1: A schematic of the test configuration for connecting H.320 codecs to an ATM network

An ATM Service Unit (ASU) performs the ATM adaptation between a G.703/704 2Mbit/s connection and the A1000 ATM switch. Each ASU supports AAL Type1 with Adaptive timing using a 'free-running' internal clock (i.e. not locked to a common network clock). The link is made by manually establishing Virtual Paths (VPs) of 3Mbit/s through each network element (e.g. ASU and switch). 3Mbit/s channels are used so that policing is not invoked during these initial tests.

3. Conclusions and comments

The link is in daily use by engineers as a convenient videotelephony link whilst they are installing and configuring BT's ATM Trial Network. The quality of the link and coded pictures is very good and is the same as an equivalent 2Mbit/s ISDN link. A laboratory test has also been carried out by connecting the two codecs to a General DataCom ATM Hub which resulted in a similar connection performance.

It should be noted that this is a very preliminary test and does not give a clear indication of what the performance would be with a heavily loaded network and the resulting impact on the coded pictures. More stringent, formal testing is planned for the near future together with inter-operability tests with other participants in the European ATM Trial. Further tests will also employ SRTS timing, policing and formal subjective testing.

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