

## Background

In July 2005 JANET(UK) (formerly UKERNA) provided INUK Ltd with a 100Mbit/s JANET connection to trial a multicast-based IPTV service. This small scale trial saw a number of universities make use of the service to deliver UK free to air television channels or Freeview to their users, most of whom were students in halls of residence.

Following on from this trial JANET(UK) and INUK have signed an 'Agreement for the Provision of Service over the JANET Network'. This agreement enables INUK to deliver its IPTV Freewire service to JANET-connected organisations directly over JANET. (NB: in April 2009, INUK was acquired by Move Networks Inc.)

## Technology

As part of the Freewire service, television channel content is delivered by JANET using multicast so no hardware is required on-site to receive TV signals (i.e. no aerials, receivers or servers). Students wishing to watch the Freewire service simply need to download a software client to install on their personal computer. This approach has multiple technical and practical advantages over a local server-based solution.

Inuk's encoding is based on H.264 MPEG4, thereby reducing the bandwidth requirements for each channel. Compared to an MPEG2 stream, MPEG4 streams require approximately half the bandwidth (typically 1.5 Mbit/s per stream).

## Service

The Freewire service package provides a number of television and content services to JANET-connected organisations including:

- licensed re-broadcasting of UK free-to-air channels
- licensed delivery of UK Premium channels and on-demand content
- full range of licensed international channels, both free-to-air and Premium
- integration of existing organisational video content into a dedicated TV channel available to all users of the service
- Digital Asset Management and Channel Management for organisations that need support to create or repurpose their own multimedia content.

Further details on Freewire are available from:

<http://www.movenetworks.com>

Readers are also referred to JANET(UK)'s statement on Television Licensing and IP Television Services, available at:

<http://www.ja.net/development/iptv>