

UKERNA is developing a voice and collaboration environment for the JANET community, called JANET Talk. It is anticipated that an initial service will be available in Summer 2007. This document gives a taster of what the service should provide.

Voice over IP

VoIP (Voice over IP) is the technology used to transmit voice packets over a data network using IP (Internet Protocol).

JANET connected organisations have traditionally used analogue PBX (private branch exchanges) and the PSTN (Public Switched Telephone Network) to transmit voice traffic. More recently however, the JANET community and other education networks have been using IP-based voice services. The benefits of an IP-networked voice service are:

- low call costs (within the IP domain)
- the ability to use existing data infrastructures for voice traffic
- additional features such as using IP trunking between locations, providing remote and roaming users with telephony facilities etc.

JANET Talk

It is intended that the JANET Talk infrastructure will link voice with a rich set of collaboration features, to provide a single user client capable of communicating over the JANET network. Some of the likely features intended from the service are:

- **Standards based technology** – JANET Talk will be based on SIP (Session Initiation Protocol). This will enable standards based interoperable voice endpoints to use the service.
- **Free downloadable software** – in its basic form, JANET Talk will comprise of a ‘free to use’ software-based voice client.
- **Secure central register** – a resilient, reliable and secure ‘carrier grade’ subscriber database and central register of users.
- **Organisational control** – by devolving the management of the service to an organisational level, JANET Talk will provide users and organisations with maximum flexibility.
- **Ease of administration** – UKERNA will provide a SIP domain and administration rights to a nominated contact at each JANET-connected organisation.

Each JANET-connected organisation wishing to make use of JANET Talk will be allocated a number of user entries, enabling them to distribute voice clients as they wish, both within the JANET community and externally.

Additional Features

JANET Talk is being designed to make the service as easy and user-friendly as possible. Features and facilities are being added to promote collaboration throughout the user base. These include:

- **Search facility** – JANET Talk will provide users with the ability to locate each other using search criteria such as name, job type, job function and interests. This is aimed at facilitating new collaborative activities among users.
- **Collaboration tools** such as shared whiteboard, application sharing, realtime video and chat can be used in conjunction with voice to enhance the collaboration experience. These tools will be provided through the software client.

Interoperability

It is anticipated that JANET Talk will operate outside of its environment in the following ways:

- **PSTN breakout** – JANET Talk users will be able to make telephone calls to traditional PSTN users, enabling organisations to have both post-pay and pre-pay billing.
- **Connectivity** – the ability to connect interoperable equipment and standards-based systems across disparate networks, including other National Research and Education Networks. JANET Talk is not limited to the JANET community, and organisations are able to add users from outside the network.
- **Conference bridging** – the provision of a conference bridging facility, to allow conference calls to take place between both IP and PSTN endpoints.

Advice and Support

UKERNA provides an advisory service for VoIP and IP Telephony to all JANET-connected organisations.

Areas where the service is able to provide independent technical support to organisations include: interconnecting traditional PBX equipment over network links using IP; implementing IP telephony; utilising VoIP in the form of MSN, AOL, GoogleTalk, Skype etc.; and connecting to an ISP PSTN gateway service. UKERNA provides the advisory service at no charge to JANET customers; a chargeable consultancy brokering service is also available for more complex investigations. For further details, please contact the JANET Service Desk:

service@ja.net

Further information on JANET's voice service is available at:

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