

CONFIDENTIAL

PROJECT BEANY

An Opportunity to Participate in a Broadband, Open Access

Public Telecommunications Network

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1. INTRODUCTION

National TeleCable Management Ltd of the UK and TeleTronic Communications Ltd. of Canada are the co-sponsors of **PROJECT BEANY**, the purpose of which is to provide an approximate 5,000 termination test-bed for interactive services over an integrated broadband network.

The pilot network will offer a market demonstration of the demand for information technology services delivered over an open access broadband public network, *several* years ahead of the evolutionary timeframe of the PTTs as embodied in programmes such as the multi-national RACE programme sponsored by the EEC. When licensed under the Telecommunications Act 1984, it will have the full status of a PTO (public telecommunications operator) with the concomitant interconnect rights with and obligations to both the other public networks operated in the UK by British Telecom and Mercury Communications and the two licensed cellular networks.

The size of the trial is determined by the requirement to provide meaningful statistical data about the market and to demonstrate the marketability of various interactive services. The co-sponsors believe that this size will also promote the development of new services.

Major benefits of this market trial will be information on managing an integrated system, marketing techniques, pricing structures, marketability of individual services, economics of various offerings for the service providers, hardware and software assessments and, most importantly, **the financial viability of a common carrier network delivering third-party services will be demonstrated to the banking community at large.**

The co-sponsors are seeking participants for the market trial who have a vested interest in the converging technologies of telecommunications, computing and television which will constitute the new IT market. Such companies will find in **PROJECT BEANY** an early opportunity to assess the market possibilities provided by leading edge, but field tested broadband technology in a deregulated legislative environment such as uniquely enjoyed in the UK.

It is expected that interest that interest in participating in **PROJECT BEANY** will be extensive. Individual corporate participants will be required either to pay a participation fee to help defray the cost of the market trial, to provide hardware or services on special terms and to be fully responsible for the development of their own service offering.

While only participants in **PROJECT BEANY** will benefit from significant privileged data resulting from the market trial, the anticipated success of the Project will bring worldwide attention to the broadband common carrier concept and to the unique UK regulatory environment which is a necessary pre-requisite.

2. TECHNOLOGY

The IVDM System (Integrated Video and Data Multiplex) is a unique application of telephone engineering techniques to computer and broadband television distribution technologies. The System will carry two-way simultaneous voice, video and data communications over broadband cable networks. Significant advantages over alternative communications systems are brought about by offering all analog video and digital data and voice services over a shared set of electronics.

The microprocessor based hardware and software transmission system consists of four units ranging from the head-end (central office) to the consumers premises. Each unit performs a number of functions including the distribution and control of transmissions.

The objective of the IVDM System is to distribute a complete range of video services, data services and digital telephony to end-user homes, classrooms and workstations. It will meet all subscriber demands and yet be priced to allow service providers to offer a tariff for each service that will stimulate consumer demand – this further promoting the development of services.

The IVDM System used in the United Kingdom will be based upon European standard telecommunications protocols, including CCIT 2.048 Mbs, CCIS and PAL.

Operating as a broadband ISDN with video switching capability, the network operator becomes a common-carrier information utility - "*the fourth utility*".

3. LEGISLATION

In 1984, the UK Government passed two pieces of important legislation which have far reaching implications for the future shape of public telecommunications services in the United Kingdom: the Telecommunications Act 1984 and the Cable & Broadcasting Act 1984. These two Acts provide the UK with a unique opportunity to accelerate the development of broadband public telecommunications networks delivering all manner of voice, video and data services.

The Telecommunications Act 1984 has created three distinct tiers of licensed public telecommunications operators in the UK:

- i) National Networks - (British Telecom and Mercury)
- ii) Cellular Networks - (Vodafone and Cellnet)
- iii) Local Broadband Networks - (21 so far licensed or in process of being so)

Broadband networks are those licensed, following the grant of the Cable Authority's franchise to deliver in addition to other services, cable programme services - that is, a range of non public broadcasting television signals. Such services may not be provided without the Cable Authority's licence and neither of the other two classes of telecommunications operators (including British Telecom and Mercury in their capacity as national network operators) are allowed to retail television signals to the public. It follows that only broadband cable networks will be legally permitted to be the retail delivery network to consumers of the **entire**, range of communication services implicit in broadband ISDN – voice, text, data and video (although at least until 1990, voice may be provides only “in association” with BT or Mercury).

In effect therefore, anybody in the UK (including British Telecom and Mercury Communications!) who wishes to construct and operate a local broadband public telecommunications ISDN **has** to hold a licence from the newly created Cable Authority.

Unless British Telecom is awarded **all**, such Cable Authority licences (which is unlikely to be the case since National TeleCable and various other companies either have, or are in the process of being awarded licences for certain urban areas) then it is virtually inevitable that, in the longer term, the UK will be served by numerous local broadband telecommunications operators working via interconnect agreements with national and international network operators.

Under its Telecommunications Licence, British Telecom as a national network is burdened by an obligation to provide universal direct access. However, for the reasons given above, British Telecom's former monopoly ownership and control of all local distribution markets is likely to come to an end as broadband ISDN emerges. The benefits to the end consumer and the commercial opportunities are likely to be similar to those experienced in the United States where the once monopoly AT&T is now divested of the regional operating companies.

Nowhere else in the world is private enterprise able to secure rights and obligations conferred by the licence to own and operate a broadband public telecommunications network in a local area but enjoying full interconnect rights and obligations to the national network.

4. SERVICES

Since the IVDM System provides a common-carrier digital/analog transmission facility which will allow any service to be offered, it is the intention of **PROJECT BEANY** to solicit the greatest degree of participation from parties interested in interactive services, including:

- educational services
- public information
- transactional services (banking, buying, booking, borrowing)
- high and low speed data communication
- telex
- videotex / teletex
- telefax
- electronic mail
- fire and intrusion alarms
- security services
- automated meter reading
- energy management/intelligent buildings
- digital telephony
- video games and contests
- ticket sales
- travel services
- software library
- stock market quotations
- narrow-casting
- digital hi-fi
- online database access
- opinion polling
- community services
- surveillance of public areas
- off-track betting
- video conferencing
- audio library
- electronic box office
- local news and events
- local radio
- medical alert and health care

5. LOCATION AND TIMING

Early in 1985 the Cable Authority announced five new areas for which they intended to award broadband licences. One of these was Bolton, in the North of England. Through a subsidiary company, Bolton TeleCable Limited, National TeleCable submitted an application in association with Reed Publishing (part of Reed International), one of the world's largest publishing organisations). The application was successful and in August 1985 the Cable Authority announced that it was to award the franchise to Bolton TeleCable Ltd.

PROJECT BEANY will be undertaken in Bolton which, apart from being an area whose demography is attractive as far as the project is concerned, has a local authority, Bolton Metropolitan Borough Council, which is particularly interested to see the early benefits of broadband telecommunications technology brought to their area.

The network will in time become the 'fourth utility' in Bolton, acting as a common carrier for voice, data, text and video information signals being retailed by third party providers. It will become the local broadband access network, capable of acting as a common carrier for all services to all locations in the area, connecting them to anywhere else in the country or overseas for the transmission or receipt of data, text, video or voice signals which comprise the services provided by third party providers. Bolton TeleCable will not compete with these service providers by retailing its own services to end users.

PROJECT BEANY will be managed against a firm programme and timetable and the sponsors anticipate that the network will become operational in the early part of 1988. This will allow time for the various software and data services to be fully developed concurrent with the system build.

6. FINANCE

The capital cost of **PROJECT BEANY** is estimated to be £3.5m which will include the purchase and installation of hardware, software and engineering services required to provide full interactive facilities together with television and voice/data communications.

As a result of the nature of **PROJECT BEANY** and the wide range of parties that will be involved, the sponsors have decided that the funding of the Project should come from a variety of sources. These will include debt and equity investors, industrial and institutional participants and Government support such as that offered under the DTI scheme for demonstration projects of advanced cable interactive services.

7. GOVERNMENT SUPPORT

The success of **PROJECT BEANY** will not only depend upon the commitment of all those directly participating in the Project itself, but will also require commitment and support from the various local and national government departments and agencies. In particular:

- The Cable Authority
- Office of Telecommunications (OfTel)
- Department of Trade and Industry
- Bolton Metropolitan Borough Council

Each of the above is acquainted with **PROJECT BEANY** and taking an interest in its progress.

The Cable Authority has contributed considerably to its development so far and, within its powers, has offered continuing support to **PROJECT BEANY**.

OfTel is fully acquainted with **PROJECT BEANY** which it regards as an important and encouraging development. OfTel has advised on the telecommunications licensing aspects so far and will continue to do so.

The DTI has indicated that subject to the usual procedures, they are prepared in principle to grant the telecommunications licence necessary for the Project to proceed.

Bolton Metropolitan Borough Council has expressed to the Cable Authority its support for Bolton TeleCable Ltd.'s plans for the development of an advanced broadband public telecommunications network in the Bolton area.

Reference can be made to the following individuals from these Departments or Authorities regarding **PROJECT BEANY**:

**The Director General
Cable Authority
38-44 Gillingham Street
London SW1V 1HU**

Tel: 01-821 6161

**The Director General
Office of Telecommunications
Atlantic House
Holborn Viaduct
London EC1N 2HQ**

Tel: 01-822 1601

**Mrs. Elizabeth Riley
Department of Trade and Industry
29 Bressenden Place
London SW1E 5DT**

Tel: 01-213 7407

**Mr Andrew Robinson
Bolton Metropolitan Borough Council
Town Hall
Bolton BL1 1RU**

Tel: 0204 22311

8. THE SPONSORS

National TeleCable Ltd was formed in 1984. Although coming from diverse backgrounds, Malcolm Matson and Patrick Scott became involved with the new UK Broadband Cable Industry almost as soon as Prime Minister Thatcher commissioned the Information Technology Advisory Panel Report in 1981. National TeleCable is widely regarded throughout the industry and in Government circles as being fully committed to exploiting the full potential provided by the coincidence of the UK legislation and advanced broadband technology.

Malcolm J. Matson is the founder and Managing Director of National TeleCable. An MBA graduate of the Harvard Business School, his special expertise is in the financing, development and marketing of higher technology and emerging industries. He is widely regarded as an authority on the future strategic development of broadband telecommunications services.

Patrick Scott is a Director of Aberdeen Cable Services Ltd. He was a co-founder of that Company and was its Chief Executive until mid-1986 when he left to devote his time more fully to National TeleCable. The Aberdeen network was the first of the new generation of broadband cable systems to become operational and is the largest in the UK.

TeleTronic Communications, is a Canadian company dedicated to the development and marketing of a range of IVDM® Systems to satisfy varying demands created by differing standards (e.g. European vs. North American) and different applications (e.g. residential vs. educational).

The firm was founded by Ian Archibald and Bob de la Salle to update and enhance the initial Omnitel II® technology of the Manitoba Telephone System. Key members of the original Omnitel II® design team were brought together under the direction of de la Salle who has been involved with the development of the technology since the mid-seventies. TeleTronic will not be recovering any of its IVDM development costs from **PROJECT BEANY**.