

## HIGH-SPEED BROADBAND FOR ALL



### Overview

High-speed internet access is a key enabler to education, business communications and economic growth, as well as being an integral part of everyday life for residential users. However in the UK alone, over 20% of the population do not achieve above 2 Mbit/s service. This case study illustrates how Fujitsu is helping communications providers (CPs) bridge the “digital divide” between customers enjoying excellent broadband connection rates and those who are not.

### The Challenge

Broadband in the UK and Europe is now a commodity service where a stable connection delivering a good level of service to everyone, is very much taken for granted. The large number of customers who have comparatively slow broadband or even none at all, where using dial-up is the only alternative, are often forgotten. These are consumers on long lines, typically in rural areas where the loop length limits the DSL line rate to well below 2 Mbit/s. This digital divide is widening even further, with the improved ADSL2+ bandwidth services hosted from exchanges. It is estimated that in the UK, up to 20% of consumers cannot achieve rates above 2 Mbit/s. So what is the solution?

### The Solution

Fujitsu’s offer is a Multi-Service Access Node (MSAN) in a cabinet to provide operators with proven technology in a ready-to-deploy solution. The design integrates best-in-class MSAN electronics, cabinet enclosure and line test capability, that is complemented by a highly skilled field installation staff. This offers CPs a truly unique turnkey solution covering planning, installation, electronics and line test, as well as supplying full Network Operations for service provision, maintenance and support, as required.

### The Benefits

#### Minimal Cost

Fujitsu’s approach minimises the CP’s investment in new electronics. On the basis that an average radius of 500 m from consumer to the cabinet is achievable, the recommended solution is based on Fujitsu’s ADSL2+ line card. This allows CPs to offer high bandwidth services on an industrialised platform, which is much more cost effective than VDSL2.

#### Minimal Disruption

Not only does the Fujitsu solution reduce initial investment, it greatly improves the customer’s experience of the service roll out by avoiding the need for individual site visits, disruption in the home or office, and most importantly re-use of their existing modems. The use of ADSL2+ is therefore largely seamless, allowing the CP to concentrate on service quality and speed of network roll out.

#### Upgrade Capability

If the demand for application bandwidth increases, Fujitsu offers a simple upgrade to VDSL2 within the cabinet. All aspects of the solution afford full re-use of the invested cabinet infrastructure deployed on day one, to allow the network to grow cost effectively. This includes all cabling, fibre handling, power, protection, security, and mechanical fixings. Furthermore, the cabinet design is based on a modular approach, allowing the addition of pods to deploy additional facilities alongside existing equipment. This ensures excellent flexibility in both service and delivery options, now and in the future.

### **Service Assurance**

Another key benefit of Fujitsu's solution is integrated line test for service assurance, using market leading test heads and Test Access Matrix solutions to offer definitive line test capability for remote fault diagnostics and service assurance. This ability is critical to avoid engineering visits to remote cabinets as a result of incorrect fault diagnosis, cuts operational expenditure and provides differentiation in service levels supported by the CP.

### **Expertise**

#### **Triple Play Services**

The Fujitsu MSAN within the cabinet can support the full triple play bundle of services, including broadband, IPTV and voice. This includes exchange-based POTS or, with the use of suitable line cards, the hosting of primary line POTS if the CP plans to build full NGN voice capability into its network. If a CP is looking to adopt this scenario as a potential upgrade path, Fujitsu can offer integrated voice line cards that allow the migration from one to the other by 'zero touch' remote provisioning. Fujitsu's comprehensive Element Management solution (FENS) allows the operator to build and provision on-board POTS on a line-by-line basis. This ensures that the Fujitsu equipment is always flexible to changing CP market requirements.

#### **Network Operations**

Key to the success of any service offering is the ability to manage and maintain the network to achieve high levels of end-user satisfaction and loyalty. As well as being one of the largest suppliers of access equipment in the UK, Fujitsu has a successful track record in broadband network operations. Fujitsu's Network Operation Centre in Solihull currently supports, maintains and operates networks on a 24/365 basis. This is achieved with a balance of highly skilled and experienced operational field staff, complemented by investment in advanced automated fault processing capability. This enables Fujitsu to offer CPs excellent service levels, which in turn drives up their end-user satisfaction.

### **Turnkey Capability**

As part of the turnkey capability, Fujitsu also provides a complete package for the installation of equipment in both internal and external locations. This includes all aspects of planning, negotiation with local councils, noticing, traffic management, cabling, Regional Electricity Supplier power, installation, commissioning, environmental consideration management, and handover. This capability offers a complete package for end-to-end service provision and operation, accelerating roll-out, while allowing CPs to bridge the digital divide and offer a Ubiquitous Service Offering (USO) to all their customers.

### **Summary**

- Best in class integration and a proven solution
  - MSAN
  - Cabinet Enclosure
  - Line Test Access
- Primary line POTS and Broadband from single line card
- High Density and low cost
- ADSL2+ for minimal end-customer disruption and simple upgrade path to VDSL2
- Managed network capabilities including 1st line maintenance, 2nd and 3rd line support
- Full turnkey of equipment, management, installation and civils

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