Responding to the Digital Divide

concepts for municipalities, operators and hardware suppliers

Abstract:

- **The "Digital Divide" is a key factor regarding the development of the telecommunications markets through initiatives at regional, national, supranational level**
- **Governments and municipalities are taking active measures to facilitate broadband availability. In many cases alternative broadband infrastructures instead of DSL are deployed.**
- **Operators/ISPs should evaluate whether subsidies and technological advances can enable viable strategies for these regions…**
- **A number of trends can be derived from the actions of municipalities, operators and infrastructure providers**

The dramatic adoption of broadband internet access is undeniable. While penetration rates from e.g. South Korea remain unrivalled (near 25% EOY 2004 of population according to Point-Topic), the high growth rate in most developed countries is rapidly increasing the installed base of broadband users. A landmark in 2004 was the announcement that more than 50% of US internet users are now connecting through broadband.

Yet, a number of reasons have kept a significant number of regions from receiving broadband coverage: copper line length and/or quality, low and dispersed number of users, older technology which upgrades at great cost only (e.g. such as the German OPAL networks which have been massively deployed as fiber-to-the-curb or fiber-to-the-home yet with non-contemporary systems) all lead to very uncertain business cases. Accordingly operators have focused their deployment on regions with better ROI (return on investment).

Governments throughout the world have put broadband development strategies on their agenda because broadband internet access is one of the key Information and Communication Technologies (ICT). Depending on the degree of public intervention roughly 5 different models can be distinguished.In many of these cases wireless systems of different types (see also our previous Market Review on wireless technologies for a partial overview) are applied instead of wireline platforms. Sometimes satellite connections serve as backhaul because of the remoteness of the location. Because satellite's limitations in cost, bandwidth and quality of service a number of actors have reworked their strategy and invest in backbone/backhaul networks to strengthen the platform's overall potential.

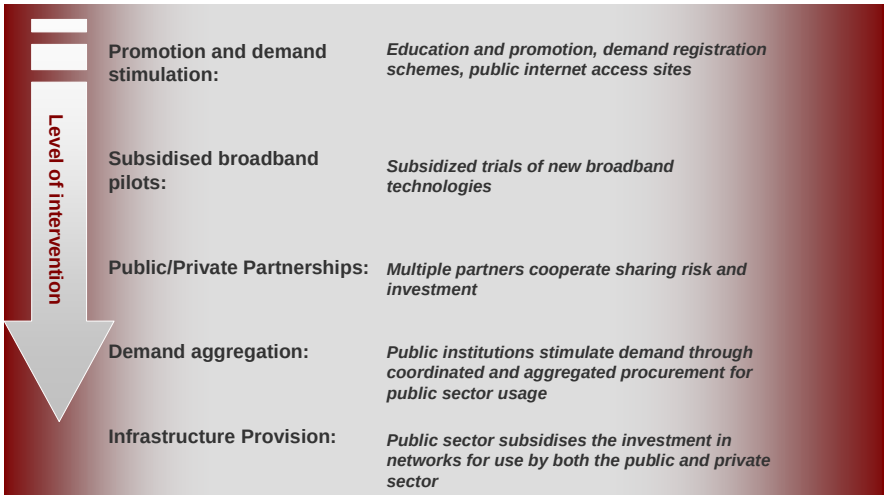
A key debate is ongoing regarding the impact alternative platforms can actually bring towards these goals. For one, operators will be inclined to focus their expertise on as few technologies as possible. Accordingly the question arises whether municipalities would need to be installing themselves as (neutral) operators based on fiber, wireless or Powerline to kickstart rural markets.

From National to local focus : Some Digital Divide projects

"Alternative technologies for broadband access" (France)	http://www.datar.gouv.fr
UK Broadband Aggregation Project (United Kingdom, cancelled)	http://www.adit.gov.uk
Broadband for Rural and Northern Development (Canada)	http://www.ic.gc.ca
Group Broadband Scheme (Ireland)	http://www.dcmnr.gov.ie
RSEIPC Powerline Project (France)	http://www.rseipc.fr
Franklin PUD Wireless network (USA)	http://broadband.franklinpud.com
Broadband Partnership Project of Grafenwörth (Austria)	http://www.grafenwoerth.at/
"La chaumière haut débit " (FR)	http://www.danslaforet.net

The following slide highlights different models of public intervention against the Digital Divide. The Models from broadband pilots to infrastructure provisioning hold the most direct potential for an active positioning alongside governmental frame programs from an operator perspective. Business cases could be enabled, e.g. through development funds.

Models of public intervention



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Similar: BSG, UK 2003

Selected Examples

Subsidised broadband pilots: "Alternative technologies for broadband access" (France)

Program from DATAR[1], CDC[2] and Research Ministry (renamed "broadband Access and Applications for territories"). Aimed at subsidizing broadband projects promoting alternative access technologies such as Satellite, WiFi, Powerline…

Infrastructure Provisioning: Utility Carrier's Carrier model (USA)

The Franklin PUD utility in Pasco, USA has created and operates a fiber and wireless (WiFi) network as carrier's carrier in its region. The infrastructure is an open platform available to any service provider who wants to deliver services to the end end-users. Franklin PUD itself is forbidden by state law to engage in retail activities. Accordingly Franklin PUD has launched the network as neutral operator in order to enable better broadband coverage and economic strength of the regional location.

Demand Aggregation: UK Broadband Aggregation Project (UK)

Public sector demand for broadband connectivity is regionally aggregated and procured through Regional Aggregation Bodies called "Adits". A lot of criticism has arisen regarding dependencies between Adits and other agencies. Eventually the Department of Trade & Industry stopped funding and closed the national aggregation board in late 2004. Internal errors, heavy reliance on anticipated revenue of the aggregation body business case and slow response time have been quoted as key barriers to success.

[1] Body under the Ministry of state reform and and land planning dedicated to regional development.

[2] Caisse des Dépôts is a state-owned financial institution that performs public-interest missions on behalf of France's central, regional and local governments. It is a long-term partner of local and regional governments and acts as an investor in local development projects.

Food for thought - the different players

Municipalities:

- Subsidies should lead to ownership of infrastructure or contractual return payments instead of subsidizing the provisioning of services only (for a predefined period of time). The French ministry actually restricted this measure in early 2005. Reasoning is that it could work against long term broadband availability because the municipality has spent funds but has not acquired perennial networks and service availability.
- It can be a wise choice not to work with the incumbent alone and not to work with copper infrastructure alone in the long run… Arising competition might actually force the incumbent to become active and can result in a more competitive and innovative market framework. Demand aggregation tenders needs to take into account that the incumbent will most likely always be able to offer at lowest cost. This might not be the best choice in terms of broadband development.
- Accordingly governmental requirement profiles and evaluation guidelines need to take into account more than pure cost and service quality but also the impact on future competitiveness.

Operators:

- A passive/reactive strategy might still allow access to rural households if other players are creating neutral, wholesaling infrastructures.
- An active strategy could lead to ownership and / or subsidized creation of new infrastructure. In some cases a double role as wholesale operator and provider of end-user services is possible. This promises competitive advantages with increasing scale.
- The Digital Divide field can become a niche market for (new) dedicated operators. They already exist and market broadband connectivity either directly to end-users or as wholesaler for the municipality (e.g. Tristate Broadband, USA or Axione, France).

Manufacturers:

- Quite often municipalities will expect a complete proposal for creation and operation of networks. Especially in emerging technology fields such as Powerline or new Wireless platforms partnerships and alliances should be formed to respond to tenders with a complete solution of infrastructure set up, operation and marketing.
- It is not uncommon for manufacturers to start up Joint Ventures or strategic partnerships in order to target these customers dedicatedly (e.g. ACcess Broadband, USA or Power PLUS Communication, Germany). This can serve as an additional channel to market and help reduce barriers of entry… if the technology vendor can find venture capital and a partner...

Dieses Dokument ist auch in deutscher Sprache erhältlich
Ce document est également disponible en Français

About bmp Telecommunications Consultants:

bmp TC is a strategic consultancy in the field of telecommunications with a focus on central issues related to business model based on broadband platforms such as DSL, Wireless (WLAN, WLL, Wi-Max), Satellite or Powerline Communications.

Typical projects include business model set-up and evaluation, support for market analysis and market entry, project definition, set-up and project management. bmp TC provides advice aimed at ensuring long-term success and offers high-value solutions to address real-world problems and opportunities, based on its clients' unique competencies and its high international expertise.

Hands-on experience combined with a wide-ranging industry view enables bmp TC to create and launch new services for the market and to offer exceptional added value to its clients. The implementation and introduction of unique and justifiable business models can therefore be realized in all fields of the telecommunications sector.

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