Wireless Future Based on Fiber

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Abstract. When a whole area is provided with a FTTH network for consumer communication and entertainment services it opens up a variety of possibilities and opportunities for wireless services to add connectivity and services in the market place. Always-on connection radically change the way consumers access and work with information. This is becoming evident in markets with high penetration of high bandwidth always-on services such as Iceland, where about 85% of households have an Internet connection and over 60% of all households have a DSL connection for their Internet usage. When enjoying such rich connectivity in the home and workplace, the market will demand the same access to their data and services when mobile.

Keywords: FTTH, fiber optics, WiMax, DSL, wireless, Internet services, mobile services

Introduction to Reykjavik Energy

Reykjavik Energy has almost 100 years of operating history. The current company was formed in the year 2000 with the merger of Reykjavik Electricity, Reykjavik Hot Water Works, (that provides hot water for heating and washing, pumped directly from natural hot springs) and thirdly Reykjavik Cold Water Works, that provides cold consumable water with HACCP quality certification for food production, from natural springs. Such a food grade cold water distribution is a rarity in the world and a fine example of the dedication and professionalism of RE.

Reykjavik Energy has continued the ambitious development of these three basic utilities inherited from the preceding companies and has received both an ISO 9001 certification and an ISO 14001 environmental certification along with an OHSAS 18001 certification for safety standards in the workplace.

Data networks are the 4th utility run by the company and the Reykjavik municipality put sewage management under the company as its 5th utility only a few months ago.

Reykjavik Energy has not only grown in scope concerning the services offered to Reykjavik. The service area has grown quite rapidly and the company now serves about two thirds of the total population of Iceland with one or more of its utilities.

Much of the geographical expansion has taken place by the surrounding towns merging their existing utilities with RE (and received stock in RE). The towns benefit by RE competent management of the economy of scale and enjoy lower pricing, long term stability and service guarantees.

Reykjavik Energy’s Fiber Experience

Currently the company has gathered more than 6 years experience in communication services and fiber deployment, starting in 1999. Fiber deployment fits very well with the core
competencies of a traditional utility company, such as building and managing the investment of a pipe based ground dug citywide infrastructure and operating and regulating a wide and complex network of flows, maintaining a guaranteed service to all households and businessess in an area.

True to these roots and core competencies of utility company RE has focused on building the infrastructure for the long term. Ground dug fiber laid in plastic pipes has a lifetime measured