Dsl Vs. Cable Essay, Research Paper

2.2 Why focus on Internet access?

Internet access has several desirable properties as an application to

consider for exercising residential infrastructure. Internet technology is

based on a peer-to-peer model of communications. Internet usage

encompasses a wide mix of applications, including low- and high-

bandwidth as well as asynchronous and real-time communications.

Different Internet applications may create varying degrees of

symmetrical (both to and from the home) and asymmetrical traffic

flows. Supporting all of these properties poses a challenge for existing

residential communications infrastructures.

Internet access differs from the future services modeled by other studies

described below in that it is a real application today, with growing

demand. Aside from creating pragmatic interest in the topic, this factor

also makes it possible to perform case studies of real deployments.

Finally, the Internet’s organization as an “Open Data Network” (in the

language of (Computer Science and Telecommunications Board of the

National Research Council, 1994)) makes it a service worthy of study

from a policy perspective. The Internet culture’s expectation of

interconnection and cooperation among competing organizations may

clash with the monopoly-oriented cultures of traditional infrastructure

organizations, exposing policy issues. In addition, the Internet’s status

as a public data network may make Internet access a service worth

encouraging for the public good. Therefore, analysis of costs to provide

this service may provide useful input to future policy debates.

3.0 Technologies

This chapter reviews the present state and technical evolution of

residential cable network infrastructure. It then discusses a topic not

covered much in the literature, namely, how this infrastructure can be

used to provide Internet access. It concludes with a qualitative

evaluation of the advantages and disadvantages of cable-based Internet

access. While ISDN is extensively described in the literature, its use as

an Internet access medium is less well-documented. This chapter

briefly reviews local telephone network technology, including ISDN

and future evolutionary technologies. It concludes with a qualitative

evaluation of the advantages and disadvantages of ISDN-based Internet

access.