HELSINKI UNIVERSITY OF TECHNOLOGY
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Software Processes for Dummies: Re-inventing Wheel in Agile Organizations

Master's Thesis
Espoo, June 18, 2008

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ABSTRACT OF MASTER'S THESIS

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Abbreviations and Acronyms

2k/4k/8k mode	COFDM operation modes
3GPP	3rd Generation Partnership Project
ESP	Encapsulating Security Payload; An IPsec security protocol
FLUTE	The File Delivery over Unidirectional Transport protocol

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Chapter 1

Background

The IPDC Forum is an industry forum that investigates the business concepts based on the IP Datacasting technology. They describe IP Datacasting, or IPDC for short, in the following way:

> *In IP Datacasting any digital content can be delivered cost effectively over broadcast networks to large audiences at the same time. For consumers, this means more choice in accessing multimedia content and a likely increase in content possibilities.*
>
> *IP Datacasting is a service where digital content formats, software applications, programming interfaces and multimedia services are combined through IP (Internet Protocol) with digital broadcasting. [2]*

The way IP Datacasting is used can be divided into two rough categories:

- Downloading files or applications for later use, and
- Real-time streaming

The INDICA project uses a customer centric value chain model, based on a similar model laid out by the European Commission [1], to understand what parts an IPDC service consists of.

INDICA's value chain model is presented in Figure 1.1.

This chapter lays out the background of IP Datacasting. First, some usage scenarios illustrate what types of services IP Datacasting enable. Section **??**

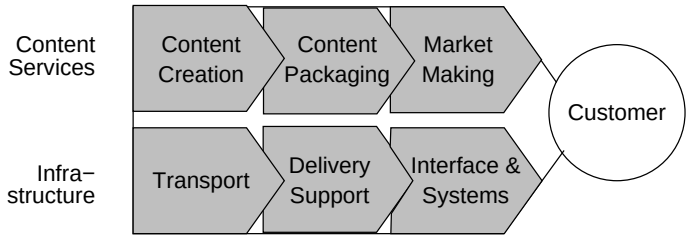

Figure 1.1: The INDICA two-layered value chain model.

describes the IPDC value chain, and Section ?? defines terms used in this thesis. Then, Section ?? describes the objective of this thesis, and Section ?? restricts the problem scope. Finally, the structure of the thesis is described in Section ??.

Physical channel	8 MHz (also 6 MHz or 7 MHz possible)
COFDM mode (number of subcarriers, subcarrier width, signal element length)	8k (6817, 1116 Hz, 896 μs) or 2k (1705,4464 Hz, 224 μs)
Guard interval (8k/4k duration)	1/4 (224/56 μs), 1/8 (112/28 μs), 1/16 (56/14 μs) or 1/32 (28/7 μs)
Inner code rate	1/2, 2/3, 3/4, 5/6 or 7/8
Signal element constellation	QPSK, 16-QAM or 64-QAM

Table 1.1: The DVB-T transmission parameters.

Bibliography

[1] European Commission. Strategic Developments for the European Publishing Industry towards the Year 2000 - Europe's Multimedia Challenge, 1996.

[2] IPDC Forum. About IP Datacasting - Overview. WWW page of the IPDC Forum: http://www.ipdc-forum.org/about/index.html. Accessed 18 Feb 2004.