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# Telecommunications Policy

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## Wholesale broadband access to IPTV in an NGA environment: How to deal with it from a regulatory perspective? ☆

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### ARTICLE INFO

Available online 19 June 2013

#### Keywords:

Regulation  
Broadband  
Fibre network  
Wholesale access  
IPTV

### ABSTRACT

Network operators are increasingly competing with triple play offers from cable providers for both broadcast customers and telecommunications customers. In recent years they have invested in IPTV platforms and launched their own IPTV services. This has brought a new question on the regulatory agenda: shall network operators be obliged to offer wholesale access to their IPTV platform? And if yes, should the new wholesale IPTV product be regulated in the same way as traditional wholesale access? Or should traditional regulation be modified? While the majority of countries have so far no regulatory rules in place, some national regulators have started to become active in this market segment.

In order for alternative network operators to realise multiple play offers including IPTV they must be able to match the offers of the incumbent operators. Such replicability with respect to telecoms infrastructure is in principle no problem as long as regulatory rules on local loop unbundling and related facilities are in place. But what if incumbent operators are neither required to offer unbundled access to their FTTH local loops nor do alternative network operators have access to sub-loop unbundling? It is for this reason that many argue some form of direct access to the incumbent multicast equipment needs to be provided. Otherwise the provision of IPTV services will be restricted to large network operators.

The paper demonstrates that the regulation of wholesale access to IPTV depends above all on country specific conditions. Ex-ante regulation of access to wholesale broadband services over any DSL technology and any transport technology (ATM and Ethernet) in the sense that the SMP operator is obliged to offer a multicast functionality that allows competitors to offer TV services should be bound to a number of requirements: (1) the demand characteristics such as demand for bundled products. A precondition for determining regulatory obligations with respect to the provision of wholesale access to IPTV platforms should be that multiple play offers are the dominant form of providing telecom services. (2) The lack of cable TV operators exerting competitive pressure at the retail level for triple play products. (3) A lack of LLU in the country, so that alternative operators need a multicast WBA access to offer multiple play services.

The paper is organised as follows. The first section of the paper briefly describes the technical and market characteristics of wholesale IPTV access. The second section considers the impact of IPTV wholesale access regulation on competition, investment

☆ The article is based on a paper presented at the ITS2012 India in February 2012, which was written in late 2011. We would like to thank David Biertz for valuable comments.

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and broadband diffusion. The third section examines regulatory issues concerning access to wholesale IPTV in more detail. The final section gives key recommendations for a regulatory strategy on wholesale broadband access to IPTV.

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## 1. Introduction

Network operators are increasingly competing with cable providers for both broadcast customers and telecommunications customers. In recent years they have invested in IPTV platforms and launched their own IPTV services, which enable them to offer triple play products. As a result of these new triple play offers significant potential for inter-modal competition between cable and telecom operators has developed (Sung, 2011). But how to design regulatory policies in view of promoting inter-modal competition? As a consequence of the intensified competition between networks traditional regulatory policies are no longer adequate (Janssen & Mendys-Kamphorst, 2008). Instead, new questions have appeared on the regulatory agenda: shall network operators be obliged to offer wholesale access to their IPTV platform? And if yes, should the new wholesale IPTV product be regulated in the same way as traditional wholesale access? Or should traditional regulation be modified? While the majority of countries have so far no regulatory rules in place, some national regulators such as in Germany and in France have started to become active in this market segment.

In order for alternative network operators to realise multiple play offers including IPTV they must be able to match the offers of the incumbent operators. Such replicability with respect to telecoms infrastructure is in principle no problem as long as regulatory rules on local loop unbundling and related facilities are in place. But what if incumbent operators are neither required to offer unbundled access to their FTTH local loops nor do alternative network operators have access to sub-loop unbundling? It is for this reason that many argue some form of direct access to the incumbent multicast equipment needs to be provided. Otherwise the provision of IPTV services will be restricted to large network operators.

This paper examines whether there is a need for the regulation of wholesale broadband access to IPTV. It will be analysed under which specific market and regulatory conditions such additional market intervention is required. The paper is organised as follows. The first section briefly describes the technical and market characteristics of wholesale IPTV access. The second section considers how the regulation of IPTV wholesale access may affect competition, investment and broadband diffusion as policy objectives. The third section examines regulatory issues concerning access to wholesale IPTV in more detail. This will be done by comparing the regulatory approaches of Germany and United Arab Emirates (U.A.E.) and the results in terms of IPTV penetration.<sup>2</sup> Germany and U.A.E. are chosen because these two countries largely differ in terms of both market characteristics and wholesale access regulation. Thereby it will also be considered to what extent available wholesale broadband access products enable alternative operators to duplicate economically the incumbent bundles including IPTV. In order to put the findings from Germany and the U.A.E. in a broader context the regulation of IPTV in selected European countries and the U.S. will also be considered. The final section gives key recommendations for a regulatory strategy on wholesale broadband access to IPTV.

## 2. The market for IPTV

### 2.1. What is IPTV?

Internet Protocol Television (IPTV) is digital broadcast-quality television and/or video signals that are delivered to customers using a broadband connection over Internet Protocol (IP). The ITU-T Focus Group (2008, p. 698) defines IPTV as multimedia services such as television/video/audio/text/graphics/data delivered over IP-based networks managed to support the required level of QoS/QoE, security, interactivity and reliability. IPTV has to be distinguished from video streaming over the public Internet viewed on a PC.<sup>3</sup> Different from Internet video streaming which can be used by anyone, users of IPTV (as well as IP addresses and locations) are known by the network operator. In order for customers to use IPTV they need to have a set-top box with a television display (Tadayoni & Sigurdsson, 2006).<sup>4</sup> IPTV operates on a different premise than traditional satellite or cable television in that channels are being pushed to the consumer's home on a per-selection basis. Moreover, IPTV provides two-way communication (customer requests a programme from the TV guide and the programme delivers). In this respect IPTV goes beyond traditional linear one-way TV distribution, enabling on-demand services and interactivity. Any type of content (movies, video gaming, etc.) can be distributed on demand, allowing service

<sup>2</sup> Different market and regulatory characteristics are important in the sense that the purpose of the paper is to show that regulating wholesale access to IPTV depends above all on country specific conditions. By choosing two rather different countries it will be possible to elaborate IPTV-related regulatory requirements under different conditions.

<sup>3</sup> The paper does not cover video streaming over the public Internet viewed on a PC.

<sup>4</sup> The set-top box enables the implementation of additional services such as 'time-shifted' viewing of TV broadcasts, or 'catch-up' viewing if the viewer interrupts a live broadcast programme.

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