- Minimize the risk of regulatory arbitrage favoring certain players in one sector over players in other sectors.
- Define policy goals and implementations without reference to or implications for specific technologies and businesses models, and instead focus on the desired results. Technology and business models should not be defined or limited by regulation; they should be neutral, giving consumers the ultimate choice.
- Abolish monopolies such as terrestrial broadcasting monopolies for public-service content transmission. State aid to public services should take into account implications for technology markets.

Policymakers should approach policy goals from a service perspective, independent of technology:

- Access technologies – telecom, cable networks, terrestrial and satellite broadcasting – should be treated equally. The relevant dimension to consider is the service not the underlying technology.
- Device technologies – TV, PC, mobile phone, set-top box and so on – should be treated equally. The service should be in focus, not the devices, because they can be connected to different networks and provide different services.

Policymakers should strive to increase competition and decrease risk of competition distortion for digital media distribution across TIME sectors.

- Increase competition and economies of scale in product markets TV such as set-top boxes, and conditional access and DRM solutions. Mandating open industry standards across technologies for content encryption and TV clients would spur competition. Freeing consumers from closed proprietary solutions would drive down costs by expanding the market. Giving consumers the ability to move legally acquired content across private devices without technical content-protection restrictions (legal private use) is a vital step in making legal, interactive, network-based media services more attractive.

Policymakers can stimulate and promote growth of interactive, personalized, on-demand TV/video and media distribution platforms (both managed and unmanaged as defined in Box 2) since they play an important role for consumers, businesses, governments and the public sector. Policy initiatives should therefore take into account:

- End users should be given unbiased public information on all available digital-TV technologies.
- Must-carry obligations for managed TV distribution should apply to linear as well as non-linear (on-demand) formats. Linear programming is technology-specific and so is non-linear; let them compete on fair terms.
- Technology neutrality for programming and aggregation should encompass both public and commercial media service providers.
- Linear TV programming should also be made available to distributors and consumers in non-linear TV-on-demand format. This should be on fair, timely and unbiased terms equal to linear programming terms. Consumers can then choose individual channels and programs or the more traditional linear programming.

Policy makers can increase market efficiency for legal content and media distribution by improving availability in terms of scope and timing of a wide range of content for interactive, personalized, on-demand distribution (managed and unmanaged platforms).

- Cross-border licensing should decrease transaction costs when rights are cleared for multiple regions in one instance and in full competition.
- Licensing practices should increasingly take into account the fact that new technologies have advanced content protection and billing features, offering the ability to construct payment models based on actual consumption at household or individual level and not on potential public reach, as in the case of conventional broadcast models.
- Technology-neutral terms of trade should be mandated for network-based media distribution; the price of content should in principle reflect the value of content, actual consumption and business model-related aspects (such as broadcast, on-demand, and download-to-own), and not specifics of distribution technologies and screens. This means that pricing should be independent of transmission network, device and screen.

Policymakers can decrease incentives for illegal re-distribution of content and increase the appeal of legal alternatives.

- Limit illegal arbitrage possibilities to redistribute content within and across borders by balancing conventional "windowing" and territorial licensing business practice with consumer interests by mandating fair, non-discriminatory and timely availability of digital content across all legal network-based distribution channels. Content that is legally available in one country may be illegal in another. Territorial licensing and conventional windowing invites illegal redistribution of content. Policy makers should take into account media production interests and promote incentives to maximize returns on media investments by stimulating the introduction of innovative new business models and value propositions. The purpose must not be to remove the opportunity to price content at different levels.

Time to act

To summarize, it is now time to act. Media convergence is here and fragmented sector-specific regulation is no longer adequate. Policymakers can harmonize regulation and legislation across converging TIME sectors, creating a level playing field for market players. This will benefit the market, consumers, service providers, media producers and vendors.

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Box 2

Managed TV is a distribution platform that offers end-to-end control to all stakeholders – from content provision to content display. This platform offers quality of service, content protection for producers and media policy control. Terrestrial, cable and satellite have historically offered unidirectional transmission, such as broadcast and linear programming. More recently, IPTV technology has entered the Managed TV platform by providing the same level of control for both linear and interactive services but also providing the benefits of interactivity and on-demand service typically associated with **Unmanaged Networks**. This latter platform is a collective term referring to several different Over-the-Top (OTT) Internet-based media applications. Typically, the access is provided by telecom and cable operators to the "best-effort" public internet. Independent of access and transport mechanisms, OTT is offered as a streaming service, peer-to-peer or download service. Providers have different approaches; some require a software client to be downloaded to a PC, whereas streaming does not. A streaming service is more dependent on the quality and capacity of the access line.

Box 3

Read more about the transformation of the media industry and its implications for network operators in Ericsson Business Review:

"Consumers want expanded TV – if you keep it simple", #1 2009

"Reshaping the business of television", #3 2008

www.ericsson.com/ericsson/corpinfo/publications/ericsson_business_review/index.shtml

MEDIA CONVERGENCE IS HERE – BUT IS IT A FAIR GAME?

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Media convergence is here – but is it a fair game?

BY: Rene Summer, *Director Government and Industry Relations at Ericsson*

Media convergence should be a wake-up call for regulators. Technological change has already changed market conditions profoundly for traditional media and communications, and regulation is lagging behind. Sector-specific legislation and regulation is threatening to stifle development and create unfair market conditions.

Box 1
Technological constituents of media convergence

Digitization of information and communication such as text, speech, pictures and moving images, which is important for transmission of information, computer processing and storage.

Increased penetration and capacity of access networks, processing capacity, screens and storage, increasing the scope of choice for end users to substitute digital services for analogue or physical.

Layered architecture separation of functions into specialized horizontal layers, making each layer specialized (access layer, transport layer, service layer, application layer) but also agnostic to functions in other horizontal layers. Previously all functions for a given service (e.g. voice) were vertically integrated to a specific technology platform. This fundamental separation gives end users the choice to use the same service over a number of different devices.

Ubiquity or the ability to be present everywhere, the omnipresence of technology that can grant end users any service, any time, anywhere on any device. Ubiquity is the bottom line impact of technological advances that result in media convergence; ubiquity is a key aspect of the convergence concept.

Media convergence (see Box 1) is already here, bringing sweeping changes for the TIME (telecom, information, media and entertainment) sectors, not only in terms of the necessary reassessment of market boundaries, market offerings and business strategies but also for the regulatory and legislative environment that sets the rules.

Several factors are creating a new media market: digitization of information and communication in combination with widespread availability of high-capacity access networks; increased processing and storage capacity; and high-resolution screens and other advances in consumer electronics.

A tremendous evolution in communication and information systems has fundamentally changed the way we access and consume media services. Previously, they were distributed using different, vertically separated networks and specialized devices. Today, media convergence allows several different services – such as movies, TV, radio and internet – to be offered over one network and one device.

Only recently we had one device and one distribution network (including physical networks) for each and every service. Of course, these dedicated technologies are still around, but are not the first choice for younger consumers. These consumers, sometimes referred to as digital natives, will in time become the new media market norm.

A digital native is someone who was born into the digital era, who has always had access to computers and digital media. Digital natives are used to having a lot of options and expect to have access to any or all content at any time. Many have also developed mixed-service habits to meet their needs. These completely new behaviors involve several kinds of media, a large selection of channels or content, and a variety of platform technologies (such as YouTube, DVDs, VoD, broadcast TV and mobile TV) that enable consumers to decide how, when, where and what they want to watch. They want to access, play and pause content at any time of the day, and to some extent from any location. This explains consumer interest in on-demand, time-shift, and to some extent, place-shift features.

A level playing field

It is in the nature of innovative technologies that they may have a disruptive effect, break existing boundaries and not just surpass earlier technical capabilities but, even more importantly, change mainstream behavior in the consumer as well as in the business sector. To stay competitive, market players are forced to adapt – they must continuously revise their strategies and business models.

Ultimately, it is the end users, the consumers, who choose which new technologies are adopted. Policymakers, however, are very important in the process. They hold the tools to define and implement the rules with which market players need to comply. Typically, regulators define the scope of technologies available to market players, thereby limiting business models and value propositions for end users.

This is where the concept of the level playing field is fundamental. Regulation can define – for each step in the value chain (from R&D to retail service offerings) and possibly for each player (incumbent or new entrant) – the available technological options, entry barriers to existing or new services markets, and variety of business models, and ultimately influence consumer choices. In other words, if you limit the choices that consumers can make, you will also limit the options from which market players can choose.

A level playing field means fairness – not that all players have an equal chance to succeed, but that they all play by the same rules. When they do, the rules create incentives for players to focus on optimizing the relevant skill set and performance. Fair competition will ultimately lead to lower costs and greater value for consumers, and will therefore maximize their benefits. Policymakers' first concern must be to set the rules in a way that gives market players the best incentives to compete.

The rules must be changed

Before we discuss the issues that need the attention of policymakers, the obvious question is why is there

a need to change at all? Firstly, policymakers must ensure that consumer satisfaction remains a key incentive and drives the behavior of market players. When market conditions change, policymakers need to reassess policy goals so they do not distort competition in any relevant sector of the market. Secondly, policymakers need to ensure that policy goals are implemented effectively and purposefully in regulatory regimes for converging markets. The report "Responding to Convergence – Different Responses of Telecommunication Regulators" (Convergence by OPTA, TR-700-OPTA, September 2008) identifies the following adverse effects of traditional, fragmented, sector-specific regulation:

- Weakening of regulatory effectiveness if alternative providers in unregulated channels [sectors] cannot be regulated
- Distortion of competition
- Reduced supply or increased cost of bundled goods and services benefiting from internal subsidies
- Regulatory flight – companies moving or being taken over by those outside the regulatory jurisdiction
- Convergence creating competition among regulators with overlapping remits.

The report also notes that the risks mentioned above require policymakers to take a broad and holistic perspective of the entire value chain and to rethink objectives, policy responsibility, governance and forms of intervention.

Key areas of regulation and legislation that need harmonization in a holistic perspective are summarized in Graph 1. These include telecom and broadcast regulation, copyright legislation and advertising, e-commerce and laws related to consumer privacy and protection. Competition authorities also play an important role when assessing market conduct and the structure of relevant markets, and are important in this reassessment process.

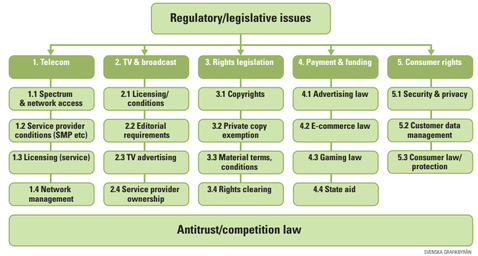
The road to harmonization

Harmonized regulation across TIME sectors is a tremendous challenge and will need serious, constructive and dedicated efforts from policymakers, industry stakeholders and consumer representatives.

The following suggests some starting points regarding what policy makers, regulators and market players should take into consideration. A number of these suggestions have already been identified by various organizations such as OECD work on Digital Content; the EU's Creative Content Online, Online Commerce Roundtable, European Cinema Online, and Interactive Content and Convergence; academic institutions such as Columbia University's Three Screens One Regulation report; and consultants such as Responding to Convergence.

Policymakers should strive to balance investment interest with consumer interest by equal treatment across all TIME sectors:

- Express the ambition for clear harmonization as a general objective to be reflected in policy rules, license terms and conditions.
- Avoid "competition" between regulation and legislation in different sectors by minimizing the overlapping and possibly contradictory remits.



Graph 1: Policymakers face increased complexity when technology convergence tears down walls between industries, outdating sector-specific regulation and legislation.