



14th Global Symposium for Regulators (Manama, 2014)

Capitalizing on the potential of the digital world

Presentations

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Capitalizing on the potential of the digital world

Consumer protection in the online world

Cullen International
Michèle Ledger

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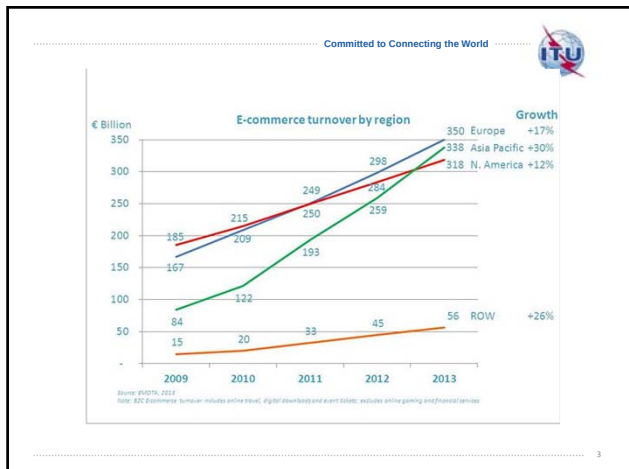
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Aim of the discussion paper

- Identify main concerns of consumers when they engage in ordinary online activities
- Identify cross-cutting regulatory issues that need to be addressed by
 - Policy makers
 - Regulators/agencies
 - Industry
- Identify best practices
- Launch a broad debate
- Comments welcome

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Consumer concerns

Search

- How will my data be used?
- Search results manipulated?

Shopping

- What if goods don't arrive?
- What redress when shopping cross border?

Paying

- Can I trust new payment methods?
- Will I need to pay extra for some methods of payment?
- Are my bank details secure?

Consuming music and video

- Why can't I access certain services?
- Do I have sufficient bandwidth to watch my film?

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Consumer concerns

Gaming and using apps

- This game was not free!
- My credit card has been charged!

Cloud

- Will my data be safe on the cloud?
- What if the service becomes unavailable?

Social media

- My children are exposed to inappropriate content
- We seem to be locked in with Facebook
- I can't get a job because of my profile

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Cross-cutting regulatory questions/areas of concern

Privacy	Security	Illegal and harmful content
Copyright	Net neutrality	Payments
Consumer rights and trust	Delivery	Consumer redress and education

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Privacy

- Many laws adopted across the globe
- In some regions, strong privacy authorities
 - In the EU, the intention is to strengthen their roles
- Emerging solutions/best practices
 - Strong role for data protection authorities to:
 - enforce privacy rules vis-à-vis large online operators
 - issue guidance to help companies respect consumers' personal data
 - foster industry codes of conduct

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Information and network security

- Surprisingly little in terms of laws
- In many countries, no obligation for companies (other than telecom operators or operators of critical infrastructure) to notify security breaches
- In many countries, no clear authority in charge
 - Digital consumer is lost when his data is compromised
 - Is this a no man's land?

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Information and network security

- **Emerging solutions/best practices**
- In the EU, new legislation in preparation to force 'key internet enablers' to notify security breaches to customers and to national regulators
 - Member states would also be obliged to set up national competent authorities to deal with network and information security
 - National competent authorities would be able require market operators to undergo security audits
- Industry led solutions

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Illegal and harmful content

- Many laws exist which deal with illegal content on the internet
 - General laws (on the roles of ISPs, hosting service providers etc.)
 - Specific laws (fighting online piracy, child pornography etc.)
- Hotlines to report illegal content
 - INHOPE network
- Industry has developed filters and provide reporting facilities
 - **But consumers are still quite often lost**
 - **Is this a no-man's land?**

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Illegal and harmful content

- **A few best practices**
 - Regulators inform digital consumers on what to do (e.g. Malaysian Communication and Multimedia Commission)
 - Regulators involved in notice and take-down procedures
 - Regulators provide information on available filters

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Consumer rights and trust

- Clear set of rights often exists in the laws
 - Who is operating the website?
 - No unfair commercial practices
 - Price transparency
 - Right to cancel the order
 - ...
- **But who is making sure that digital consumers benefit from these rights?**
- **Is this a no man's land?**

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Specific market players

- Google
 - Competition law remedies v. Abuse of dominant position in online search and search advertising
- Online games and in-app purchases
 - Principles developed by consumer enforcement authorities in the EU
 - FTC action against Apple
- Social media
 - Self-regulatory initiatives
- Cloud
 - Self-regulatory initiatives, public private partnerships

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Who is in charge?



14



The difficulty



15



Conclusion

- Laws/norms certainly need to be adopted in some areas and in some regions of the globe to protect digital consumers
- International dimension needs to be taken into account
- A no man's land seems to exist even if laws exist
- The no man's land is where there is no clearly defined regulator/agency
- There is a strong role for regulators to ensure that digital consumers are protected in this no man's land
 - Informing consumers of their rights
 - Informing consumers on what to do if things go wrong
 - Fostering self regulation
 - Cooperating with other regulators/agencies
 - Supervising the market in a more active way

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Why Competition Matters and How to Foster it in the Dynamic ICT Sector

Janet Hernandez
President, Telecommunications Management Group (TMG)
ITU Consultant

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Why Does Competition Matter?

- Puts pressure on incumbent operators
- Disrupts complacency
- Results in lower prices, increased services
- Improves consumer choice
- Allows for more innovation resulting in new business models, new players, and new services
- Today, competition is creating an unprecedented level of choice for consumers amongst fixed and mobile network operators and "over the top" (OTT) services.

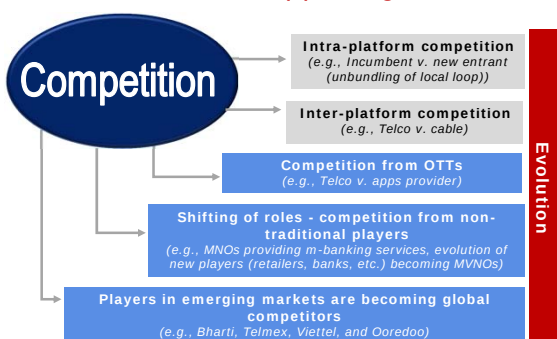


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What's Happening?



- Intra-platform competition**
(e.g., Incumbent v. new entrant (unbundling of local loop))
- Inter-platform competition**
(e.g., Telco v. cable)
- Competition from OTTs**
(e.g., Telco v. apps provider)
- Shifting of roles - competition from non-traditional players**
(e.g., MNOs providing m-banking services, evolution of new players (retailers, banks, etc.) becoming MVNOs)
- Players in emerging markets are becoming global competitors**
(e.g., Bharti, Telmex, Viettel, and Ooredoo)

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Vertical Integration, Consolidation, Expansion

Company	Content	Devices	Apps/Services	Network	Software
Comcast	NBC, MTV, Nickelodeon, iFlix		Xfinity (Phone, TV, Data, On Demand, Internet, Home Security)	Comcast cable network	Comcast On Demand
Apple	iTunes, Apple TV	iPhone, iPad	iPhoto, iMovie, iBooks		QuickTime, iWork, Safari
Google	YouTube, Google Play	Google Nexus	Google Drive, Google Maps, Google+		Google Play, Gmail, Chrome
Microsoft	MSN	Nokia Lumia	Skype, Bing, Office 365		Office, Windows
SoftBank	Y!aku! (Yahoo! Japan)	SoftBank 4G LTE	Y!aku! (Yahoo! Japan)	SoftBank 4G LTE	SoftBank Content Card

4



Changing Competitive Landscape

- Presenting lawmakers and ICT regulators with a new set of challenges.
- They must address traditional competition issues, but often with new twists.
- Introduction of apps has unleashed a variety of innovative applications and services and new business models that challenge old revenue streams and legacy regulatory regimes.
- Regulators must find ways to adapt their rules to ensure fair competition, drive investment and innovation and protect consumers.



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Regulatory Responses

- Licensing
 - Facilitating licensing processes, de-licensing, license-exempt, and issuing MVNO licenses (e.g., licenses in China, Kenya)
- Access obligations
 - Modifications in wireline network access (e.g., Canada, Brazil)
 - Wholesale, open access models (e.g., Australia, Brazil, Oman, Kenya, Mexico)
- Network and spectrum sharing
 - Viewed favorably as promoting competition and facilitating entry generally (e.g., Jordan, Kenya, Israel, India)
 - Some concern regarding collusion with active sharing although that is changing (e.g., spectrum sharing in Sweden)
 - Mandated national roaming and infrastructure sharing to assist new entrants (e.g., Chile, Colombia, France, Jordan – often challenged by incumbents) or imposed via merger conditions (e.g., Portugal/Optimus/ZON transaction)

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Regulatory Responses (cont'd)

- Horizontal and vertical integration
 - As large network operators vertically integrate with large content providers, concerns about the potential for anti-competitive behaviors are raised (e.g., pending Comcast and Time Warner merger in U.S.).
- Net neutrality (consumer/competition issue)
 - General principles of net neutrality
 - Regulations or proposed regulations (e.g., Brazil, Canada, Chile, EU, U.S.)
 - Tiered data plans, prioritization, sponsored data plans – good/bad?
 - Is regulation needed or is this addressable through quality of service regulations for data traffic?

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Regulatory Responses (cont'd)



- Internet interconnection
 - Competition concerns are being raised by content providers (CPs) and content distribution networks (CDNs) that peering and transit arrangements are no longer reasonable.
 - Is regulatory action necessary to foster competition? Would greater transparency/reporting requirements be a sufficient mechanism to address concerns (e.g., ARCEP – France)?
- Mechanisms to protect consumer choice
 - Contractual obligations (preventing customer lock-in)
 - Number portability (ease of switching providers)
 - Interoperability (e.g., cloud computing, mobile banking)

8



Conclusions

- Increasingly complex ICT regulatory environment
- To address these changes, policymakers and regulators are engaged in various efforts to ensure that competition and innovation can continue to flourish
- As markets and technologies continue to evolve, policymakers and regulators should monitor developments and carefully consider what the regulatory tools will be necessary to harness the benefits of competition for meeting their social and economic goals.

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Thank You!

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Big Data: Opportunity or Threat?

Andrew J Haire

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Agenda

- Set the stage
- Opportunities – the benefits
 - Value creation
 - Benefits for individual; society
 - Ownership
- Concerns – the risks
 - Good intentions gone wrong
- Policy
 - 4 possible areas to consider
 - State of play

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A wider View

Think Big

- There is more than Big and More than Data
- What is delivered?
- What I hope to achieve today

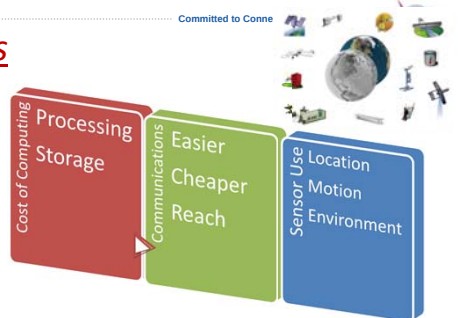


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Drivers

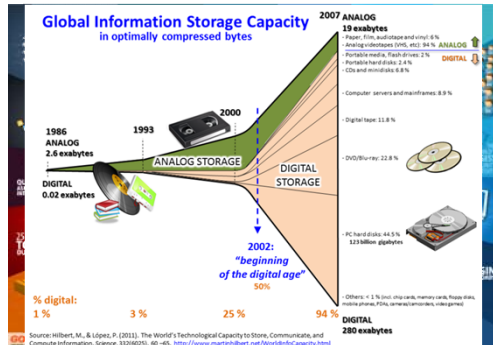


But the most versatile sensor of all: People

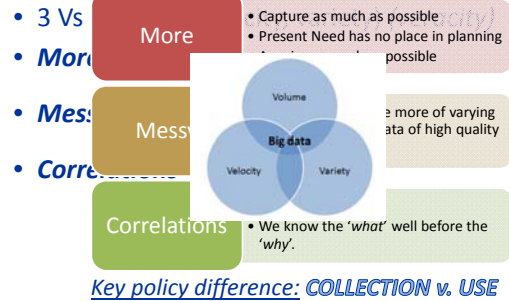
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How fast is it growing?



How defined?



Collecting

8 Principles for consideration

- Data Retention
- Data Collection
- Data Primacy
- Data Expertise



- Data Mindset
- Scalability
- Reduced Barriers
- Data's Utility

Who Benefits?

- The enterprise
 - Changing business model
 - HR
 - Transport
- The Individual
 - Improved offers
 - Roads less travelled
 - Medicine
- Society at Large
 - Climate Change
 - Education
 - Crime prevention

- Legal side effects
- Altered perceptions



Outcomes leading to Concerns

- Are you for Sale?
- Where is the Value?
- Can you be forgotten?



9



A Newer Darker Side

- Punish for something yet to be done
- Erosion of Trust
- False Confidence
- The Rise of the Data Baron

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What should be done?

Regulatory Authority's Work:

- Ensure Protection
- Protect Human Volition
- Facilitate Expertise
- Keep Data Markets Fluid

11

End



Efforts to shape and define

Further Data Sources

- Legal reviews
- European Big Data Public/Private Forums
- White House (U.S.) – Big Data Initiative
- World Economic Forum (WEF)
- ITU
- UN

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New Frontiers in Spectrum Licensing

John Alden
Vice President
Freedom Technologies, Inc.

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Overview

- Finding more spectrum for wireless broadband
- The evolution of spectrum licensing
- Sharing: gaining more access to “less” spectrum
- Technology enablers
- Licensing experimentation
- International and national exploration and implementation

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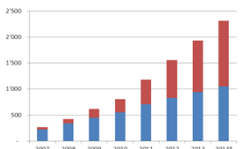
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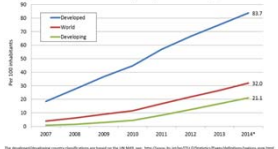
Regulators under Pressure

- ITU-R WP 5D generated an estimate of 1.34 GHz up to 1.96 GHz of total spectrum for IMT
- Broadband's “sweet spot” is under 6 GHz
 - AI 1.1 at WRC-15 is examining IMT & RLAN options

Growth of active mobile-broadband subscriptions (millions)



Active mobile-broadband subscriptions per 100 inhabitants, 2007-2014



Note: * Estimates
Source: ITU World Telecommunication/ICT Indicators database

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Traditional Models of Spectrum Licensing

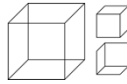
- Administrative Licensing
 - Typically for public sector or when there are not too many applicants for available spectrum
- Flexible Rights of Use
 - Commercial licenses, often by auction, and increasingly service/technology neutral and flexible
- License-exempt
 - Pioneered for RLANs (Wi-Fi), low-power & short range devices

PRAGMATISM RULES!



Spectrum Sharing

- A legacy of analogies:
 - Spectrum = land
 - Spectrum = a "cube"
 - Spectrum = a glass full of ice
- These analogies are simplistic
- It's about technology and physics:
 - Transmitter power levels, duty cycles
 - Antenna & main beam directionality
 - Receiver robustness, filters & masks, etc.



Sharing Techniques

- Frequency-based sharing
 - Re-channelization & guard bands
 - Spectrum trading, disaggregation, band managers (in limited numbers of countries)
 - Re-farming
- Time-based sharing
 - Using duty cycles or night/day alternation
- Geographic-based sharing
 - Exclusion zones
- Regulators use licensing to:
 - Set technical requirements, limit interference



Technology Sharing Enablers

- Small cells (pico, femto, micro)
- Smart Antenna systems -- MIMO
- Database systems
- Dynamic Spectrum Access (Sensing)
 - Dynamic Frequency Selection (DFS)
 - Employed in limited bands
 - Cognitive Radio Systems (CRS) –
 - Only in research stage
 - Technical barriers remain to any deployment



Experiments in Licensing

- Blurring lines between licensed and license-exempt
- Operator data offloading
- TV white spaces
- Licensed shared access (LSA)
- Satellite auxiliary terrestrial component (ATC)



Dorset



Many experiments involve hybrids of traditional licensing approaches



International & National Exploration

- Studies in ITU-R Study Groups
 - WP 5A (land mobile) – CRS reports
 - WP 1B (spectrum management) – DSA report
 - Preparation for WRC-15
- TVWS trials
 - Kenya, South Africa
- Regulatory experimentation
 - US, UK, Canada

TVWS and DSA are not allocations; systems must comply with international rules and national regulations in the bands where they operate.



Where Do We Go from Here?

- Exploration is ongoing
 - Technological – CRS, database + sensing combinations
 - Regulatory – Enforcement is a big issue
- How widespread are these new techniques?
 - Not all bands or economies may need them
- Can they succeed in granting access to new users without interference?
 - Complexity grows in sharing with mobile, radio-astronomy, radars
- Can national licensing frameworks be adapted?
 - Can access rights be balanced – what about "squatters' rights"?



Thank You!

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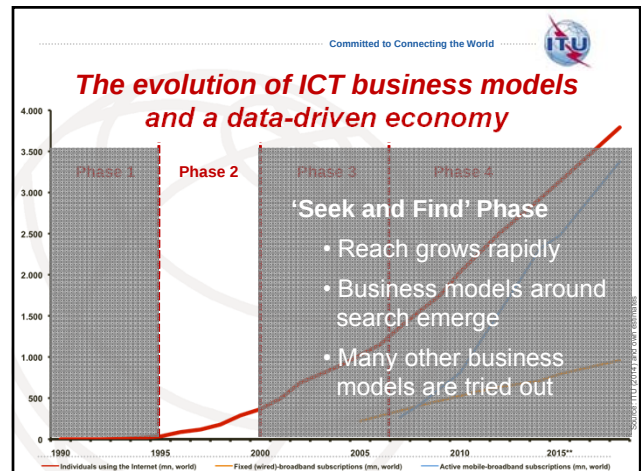
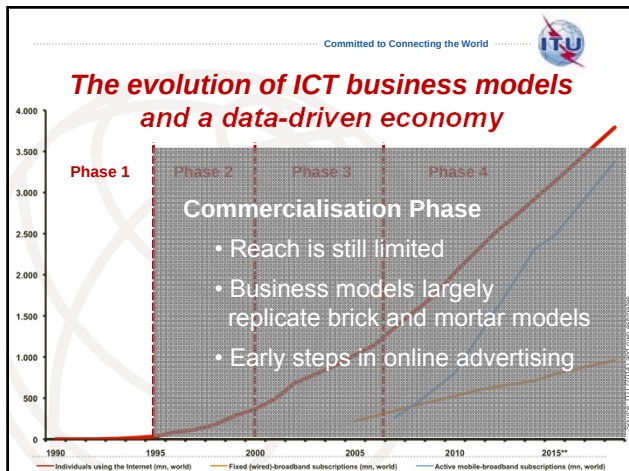
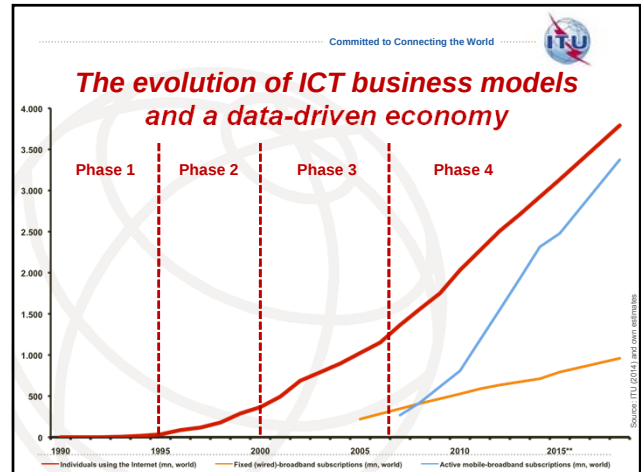
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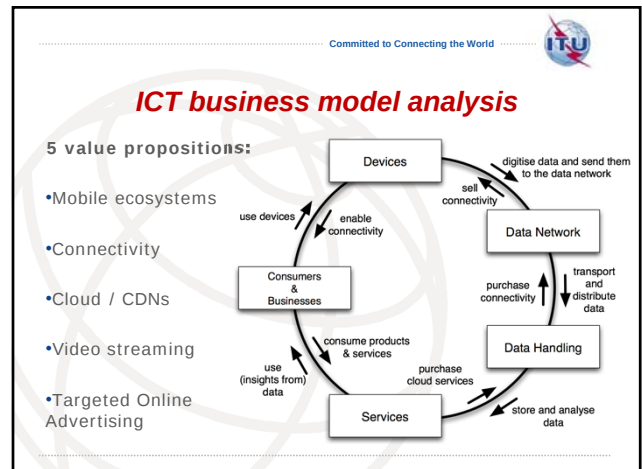
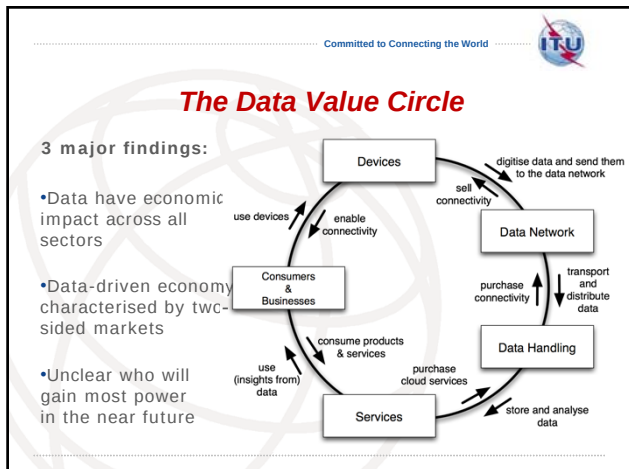
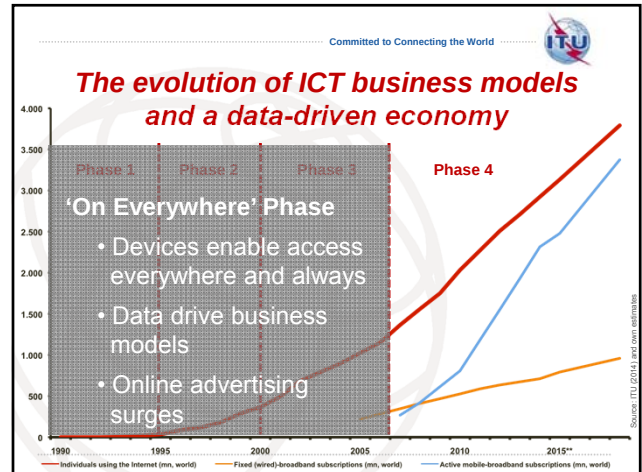
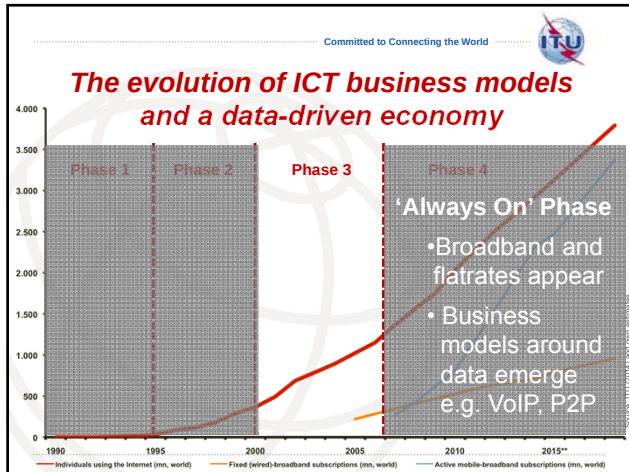
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The impact of data on ICT business models

Dr. René C.G. Arnold
Dr. Martin Waldburger

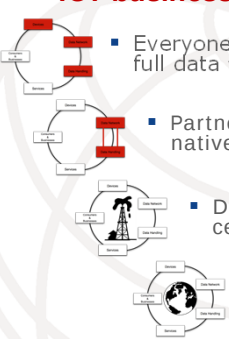
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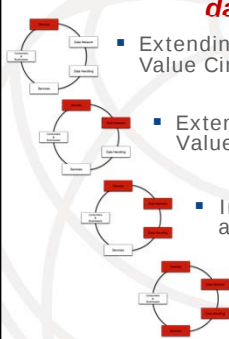
ICT business models - major findings



- Everyone seeks control over the full data value circle
- Partnerships can be a powerful alternative to entering other parts oneself
- Data are the oil of the 21st century – every drop counts!
- Data know no borders

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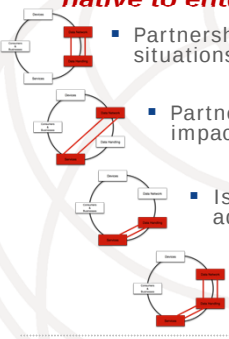
Everyone seeks control over the full data value circle



- Extending to other parts of the Data Value Circle increases actor's influence
- Extending to other parts of the Data Value Circle gives access to more data
- Increase in online advertising may be a challenge for other media sectors
- Policy-makers need to closely monitor this development

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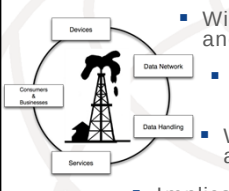
Partnerships can be a powerful alternative to entering other parts oneself



- Partnerships can enable win-win situations (also for consumers)
- Partnerships can enable a strong impact on competition
- Issues of net neutrality need to be addressed
- Lock-in effects may impede competition

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Data are the oil of the 21st century – every drop counts!



- With data across all devices even anonymous data can be personalised
- On the other hand, a paradigm shift to data prosperity may be beneficial
- What do consumers understand about this?
- Implications of the „right to be forgotten“ for the data-driven economy
- How can network operators join the oil hunt?



Data know no borders



- All the issues mentioned so far have to be addressed globally not locally
- Consumers face barriers in terms of language and dispute resolution
- General terms and conditions often conflict with national laws
- Who would be in a position to develop international guidelines, rules, etc.?
- Who would be in a position to enforce them?



Thank you for your attention.

Contact: r.arnold@wik.org
...find me on



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Using RIA to improve decision-making in the ICT sector

Andrea Renda

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What is RIA?

- “A systemic approach to critically assessing the positive and negative effects of proposed and existing regulations and non-regulatory alternatives” (OECD, 2009)
- Main steps:
 - Problem definition
 - Identification of alternative options
 - Data collection
 - Comparison of options
 - Preferred policy options
 - Monitoring and evaluation indicators

Expected benefits:

- Efficiency
- Transparency
- Accountability

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RIA around the world: the US model

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        Prelim --> Final[Final RIA]
        Final --> Draft[Draft regulation]
        Final -- Consultation --> Draft
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    OIRA1 -- no --> Agency2[Agency]
    Agency2 --> Better[Better RIA]
    Better --> OIRA2[OIRA]
    OIRA2 -- Yes --> Congress2[To Congress]
    OIRA2 -- no --> Agency2
  
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RIA around the world: other models

- Canada, Australia, Mexico, UK have well-developed RIA models, mostly focused on cost-benefit analysis of regulatory proposals
- The European Commission applies RIA to a wide range of legislative initiatives, with focus on both CBA and multi-criteria analysis
- The Netherlands, Germany, France, Scandinavian countries show more interest for simplification tools such as the Standard Cost Model
- Developing/emerging economies feature a growing interest for RIA:
 - Latin America (Brazil, Chile, Colombia, Costa Rica, Ecuador)
 - Asia (Cambodia, Lao PDR, Malaysia, Mongolia, Philippines and Vietnam)
 - Africa (Botswana, Egypt, Uganda, Ghana, Nigeria, South Africa, Tanzania)

4



RIA: main challenges

- **Procedural and organizational challenges**
 - Need for well-designed legislative/regulatory planning
 - Need for adequate governance arrangements, and in particular the existence of a regulatory oversight body
 - Requires wide acceptance in the administration
 - Adequate skills
 - Transparency in the administration and accessibility of public information
- **Methodological challenges**
 - Get the scope right: primary v. secondary legislation
 - Get the scope right: all regulations or only major ones?
 - Choose the methodology carefully

5



RIA in the ICT sector: examples

- **Leading countries**
 - UK (OFCOM)
 - European Commission
 - US FCC (cost-benefit analysis)
- **Examples of RIAs**
 - EU Roaming regulations
 - Australian RIS on lot design for clearing the digital dividend
 - Qatar's RIA on the Quality of Service for telecommunications

6



RIA in the ICT sector: checklist (1)

- **Adopt a “holistic” approach**
- **Ensure appropriate governance arrangements**
- **Build regulatory capacity in administrations**
- **Sustained focus and political commitment**

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RIA in the ICT sector: checklist (2)

1. What is the policy problem, if any?
2. Is it a market failure or a regulatory failure?
3. What are the main drivers of the policy problem?
4. Who is affected by the current situation?
5. What might happen if no policy action is undertaken?
6. What would happen under the “zero option”?
7. What alternatives would possibly address the problem?
8. What direct costs will be generated by the alternatives?
9. What are the benefits expected from the alternatives?
10. What are the likely indirect impacts of alternatives?
11. What is the appropriate criterion to compare alternatives?
12. What are the major risks?
13. How will the regulation be monitored and evaluated?

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Using RIA to improve decision-making in the ICT sector

Andrea Renda

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Monitoring the Implementation of Broadband Plans and Strategies

Colin Oliver

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Results-oriented performance management

- Key performance indicators
 - measure in order to manage effectively
 - cycle of policy implementation and improvement

Source: author

- Broadband indicators
 - Deployment and availability (established)
 - Adoption and effective use (still developing)

Source: Adapted from OECD

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Regulator roles and coordination

- Regulator may have both lead and support roles - depending on scope and capacity (many dimensions of broadband plans).
- Key areas include
 - Regulation
 - Statistics
 - Spectrum
 - Consumers
 - Civil works
 - Capacity building
 - eGovernment, education and health sectors

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Monitoring indicators and outcomes

Broadband deployment — adoption — integration		
Broadband network availability	Broadband access & capacity building for effective use	Broadband integration in economy and society
Deployment <i>Examples:</i> optical fibre cable and wireless broadband access networks	Adoption <i>Examples:</i> digital literacy programs; community access projects and programs	Integration <i>Examples:</i> e-health, e-governance, e-education and e-commerce strategies
Telecommunications indicators		
Performance indicators		Outcome measures
Indicators & outcome measures monitor achievements against targets. Performance indicators track program results, costs, benefits & progress against 'process milestones' (e.g., for regulations, agreements or contracts).		

Source: author

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Monitoring deployment and availability

- Indicators of availability are established, but their value can be enhanced by
 - Providing greater detail down to community level
 - e.g., through interactive online maps
 - Publishing information online
 - to benefit both users and service suppliers
 - Identifying barriers and regularly reviewing progress
 - and publishing progress online (see examples)
 - Monitoring market developments
 - including wholesale access and competition
- In some cases, the status of the enabling framework needs to be checked/monitored to ensure progress with the broadband plan,
 - e.g., regulatory scope and capacity;
 - spectrum and licensing reforms and gateway access;
 - facilitation of civil works and infrastructure sharing.

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Monitoring adoption and effective use

- Identify barriers and monitor progress in overcoming them:
 - Affordable access to services & equipment
 - basic access target (5% income)
 - Gaps in digital literacy
 - Gaps in digital inclusion
 - Identify other concerns (such as service quality, trust, privacy)
- Indicators of adoption and use are still being developed, but most countries have basic ICT statistics
 - including indicators of the number of customers - subscriptions, households, businesses and communities.
 - Additional information may need to come from other agencies, national statistical offices and from commissioned research
- Monitor uptake and use by 'anchor institutions' e.g., schools, colleges, libraries, public safety, medical and community centres

CONNECT A SCHOOL, CONNECT A COMMUNITY
 About Events Help
 Log Out Control Panel
 Toolkit of Best Practices and Policy Advice
<http://www.itu.int/ict4d/> Trainings

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Adoption and use: progress, feedback and response

- Specific objectives require focussed reporting e.g., with details for
 - access & uptake for target regions, social strata, micro business
 - health and education *outcomes*.
 - Important to identify information gaps
- Analysis of adoption and use provides feedback to broadband policy and planning process
 - Business users can provide feedback on important issues.
 - Trends in adoption, affordability and demand have implications for policy (e.g., speed and capacity benchmarks).
- Broadband service quality – a transitional issue? – feedback will tell.
 - User complaints have driven some regulators to monitor service quality – experiences differ among countries.
 - Service quality is crucial is broadband becomes fully *integrated* in the economy and society.



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Monitoring the integration phase

- Indicators of a fully integrated broadband environment:
 - ubiquitous availability of broadband connectivity,
 - high levels of digital literacy,
 - full coverage and utilisation of broadband by all key sectors,
 - well advanced progress with digital inclusion, and
 - universally affordable access.
 - Alternatives to online communication difficult or unavailable
 - requiring coordination among other agencies.
- Priorities for regulators in the integration phase?
 - reliability, resilience, security & quality of broadband services,
 - remaining gaps in digital inclusion and affordability, and
 - any remaining barriers to adoption of high speed connectivity.
- Three phases (deployment, adoption, integration) also affect users.

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