

# Open networks and services - promoting network neutrality

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# Outline

- Context
- Delimitations
- What is openness?
- What is net neutrality and to what degree is it a concern?
- Challenges
- Proposed actions

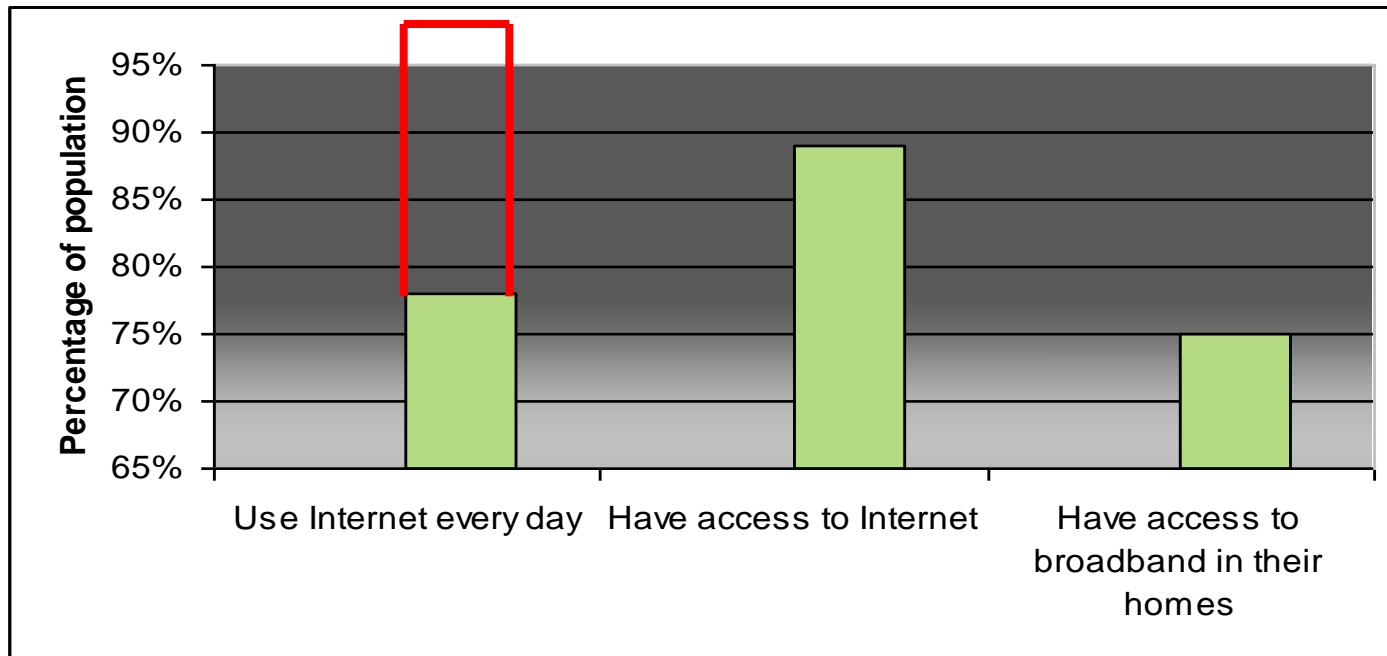
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and not necessarily those of the PTS*



# Context 1

- - Government to PTS: sort out what "openness" means in the ECS sector (and quickly...)
- Discussions on "openness" in different contexts:
  - Dark fibre (exclusivity and re-monopolisation)
  - Open (municipal) networks (various models)
  - Net neutrality and the EU telecoms package
- Wide scope of the assignment:
  - All layers (from ducts to online services)
  - Effects of "openness" on innovation, competition, access and consumption patterns

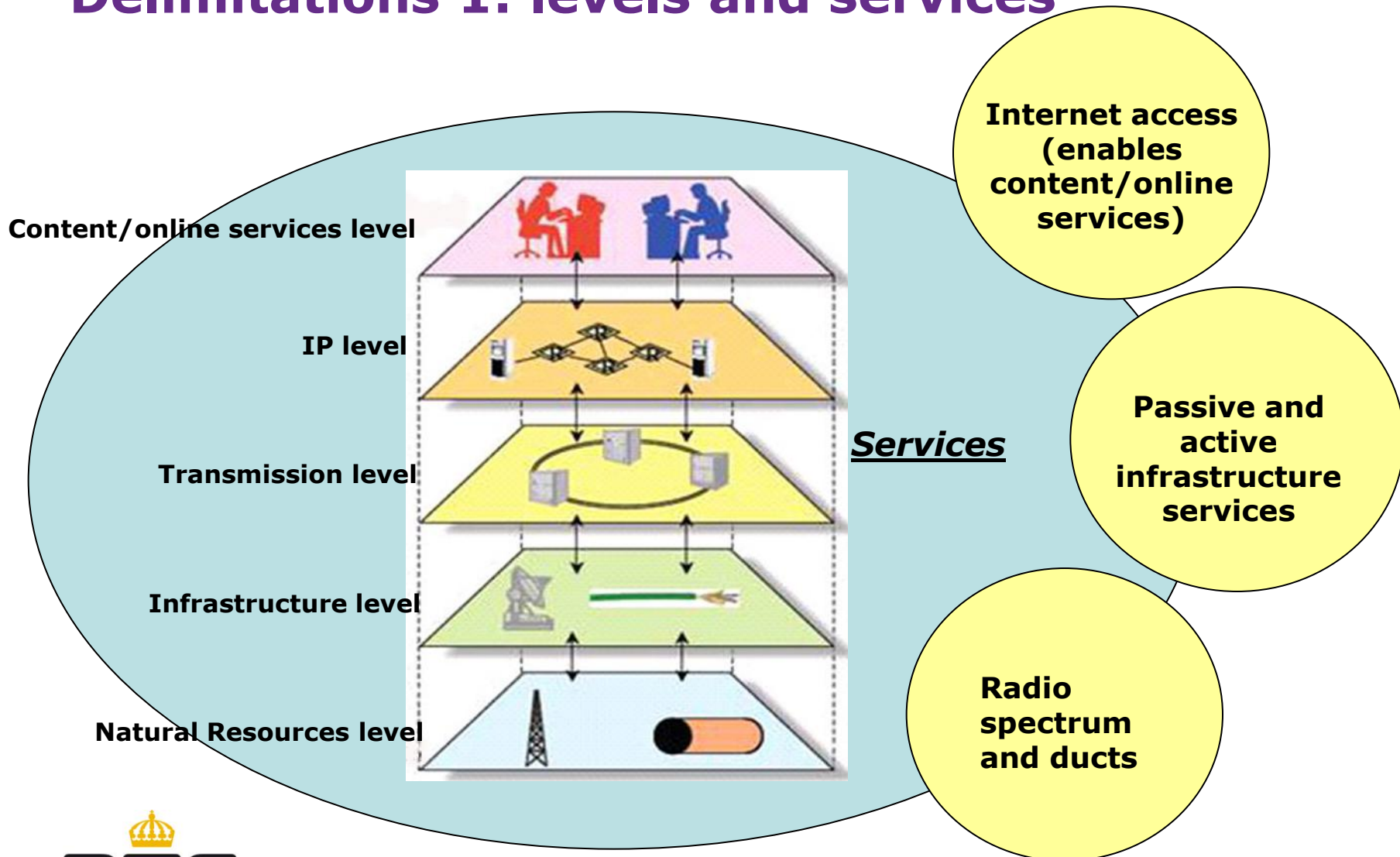
## Context 2: Broadband/ Internet access and usage



### Context 3: Broadband is becoming essential in all aspects of life

Study	Organisation	Sweden's ranking
Broadband Performance Index	European Commission	<b>1</b>
E-readiness rankings	Economist Intelligence Unit	<b>2</b>
Networked Readiness Index	World Economic Forum	<b>2</b>
Broadband Quality Score	Said Business School et al	<b>4</b>
Benchmark measurements of European e-government services	Cap Gemini for Eur. Commission	<b>5 (3)</b>

# Delimitations 1: levels and services



## Delimitations 2: What's openness not about (in our study)?

- Equipment/terminals and software (OS, media players, search engines) which *enable services*
  - May be configured so as to not be open and create lock-in effects (based on standards/protocols; portals)
- Exclusive media/intellectual property rights
  - "Lock-out" effects
- Transmission level: active equipment properties
- Infrastructure level: fibre deployment resources
  - Civil engineering, network planning, etc.

# What is openness 1

- *One way to describe openness is that all are offered least-restrictive access and own use on equal terms*
- On the IP level "all" in particular means all content/online service providers
- For transmission and infrastructure "all" in particular means all ECS wholesale customers...
- ...and on the natural resources level, all e-communications infrastructure providers

# What is openness 2

1. End user access to any content or service ultimately depends on a range of complex and related factors
  - Everything from land rights to a net neutrality principle
2. Openness is promoted by non-discrimination and functioning competition in all layers of the model
  - ...which in turn requires some customer mobility
3. Openness enables innovation and competitiveness...
4. ...but "openness" should not mean
  - insufficient incentives to invest
  - compromised network security and emergency services
  - inability to fulfill user QoS requirements

# ...and what is net neutrality?

- No legal definition
- A reference to/subset of openness on the IP and Content/Online Services levels
  - Risk of leverage of market power from the IP- to the Content/Online Services level...
  - ...unless the consumer has sufficient choice between alternative broadband Internet providers

# To what degree is net neutrality a concern (now)?

- ->Net neutrality conditions are linked to the degree of downstream competition...
- ...which depends on openness on some or several levels further downstream
- No real problem cases in Sweden yet...
  - ...some cases elsewhere in Europe
- Sufficient choice between broadband providers?

# Further conclusions on net neutrality

- The net neutrality issue first arose in the US...
- ... mobile Internet; cloud services add relevance to the issue...
- ...but the underlying competitive situations generally differ between USA and Sweden/EU.
- Traffic shaping may be necessary...
- ...and efficient in the long run – if customers are informed, have choices, and are able to make them
- Proportion of population with only one feasible broadband Internet service provider is small



# Some challenges and proposed actions

## 1

- Lack of functional competition downstream
  - SMP remedies (telecoms package)
- Where is the balance point between openness and other general interests (efficiency, safety etc.)?
  - to be tried on a case by case basis
  - telecoms package gives PTS a role in net neutrality
- Access to content and services
  - Review consumer information;
  - develop/advertise portal
  - “functional Internet access” role?



# Some challenges and proposed actions

## 2

- (potential lack of) consumer mobility
  - New rules in telecoms package
- Customer uncertainty about Internet access properties
  - Improve transparency;
  - industry agreement(s)?;
  - enhance current PTS guidelines?;
  - enhance technical test service?
- ISP uncertainty about responsibility for content
  - Review of legal situation by gov't mandated working group



# Further actions on net neutrality

- PTS will as a first option rely on industry to solve issues which may arise
  - Will work with industry; encourage/contribute to solutions
- Will continue to monitor the issue closely
- ERG/BEREC project on net neutrality

# Full English language version out in 10 days

at this address:

<http://www.pts.se/en-gb/Documents/Reports/Internet/2009/Open-Networks-and-Services---PTS-ER-200932/>

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