

Creating a brighter future

Webinar:
Mind the Gap please!
Full Transparency on Real Broadband Speeds

Moderator: **Hartwig Tauber**,
Director General,
FTTH Council Europe

FTTH Council Europe

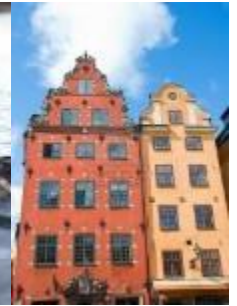


A sustainable future
for Europe
enabled by
Fibre to the Home

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Creating a brighter future

Webinar:
Mind the Gap please!
Full Transparency on Real Broadband Speeds

Moderator: **Hartwig Tauber**,
Director General,
FTTH Council Europe

Presenter: **Christian Berg**
Chief Consultant
Danish Energy Association



Mind the Gap, Please!

Full Transparency on real broadband speeds

FTTH Council Webinar, 17 December 2013, 11:00-12:00 CET



Agenda

1. Danish telco-utilities with FTTH
2. Mind the Gap, Please!
3. Why does transparency matter?
4. Danish agreement on marketing of broadband speeds
5. Implementation
6. EU approach
7. Q&A



Danish telco-utilities with FTTH

Orange Energy companies with FTTH rollout

Green Companies owned by municipalities - FTTH is legally restricted

Light Green No FTTH rollout has been announced

- 1 Bredbånd Nord
- 2 HEF Fibernet
- 3 Five energy companies and Lyse/Altibox
- 4 EnergiMidt
- 5 Verdo
- 6 Galten Elværk
- 7 NRGi
- 8 Østjysk Energi
- 9 SE
- 10 TRE-FOR
- 11 Energi Fyn
- 12 Sydfyns Intranet
- 13 SEAS-NVE



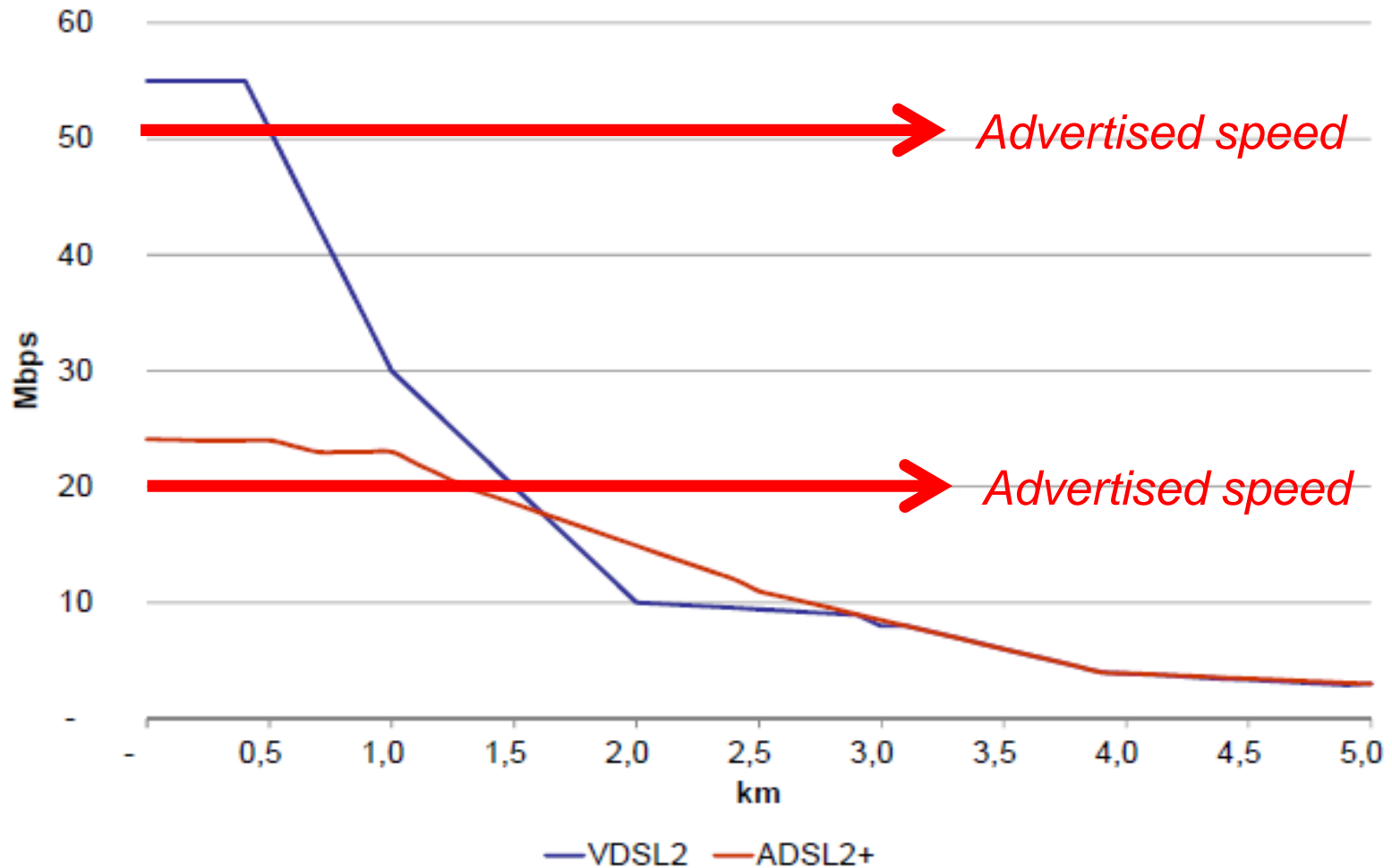
- Homes passed ~ 900,000
- Connections ~ 300,000
- Internet, TV (IPTV, analog), VoIP
- Entry level: 30/30, 50/50 Mbps
- Line capacity: 100 Mbps, 1 Gbps
- Guaranteed broadband speed



MIND THE GAP

between advertised and effective *speeds*

The copper gap is growing



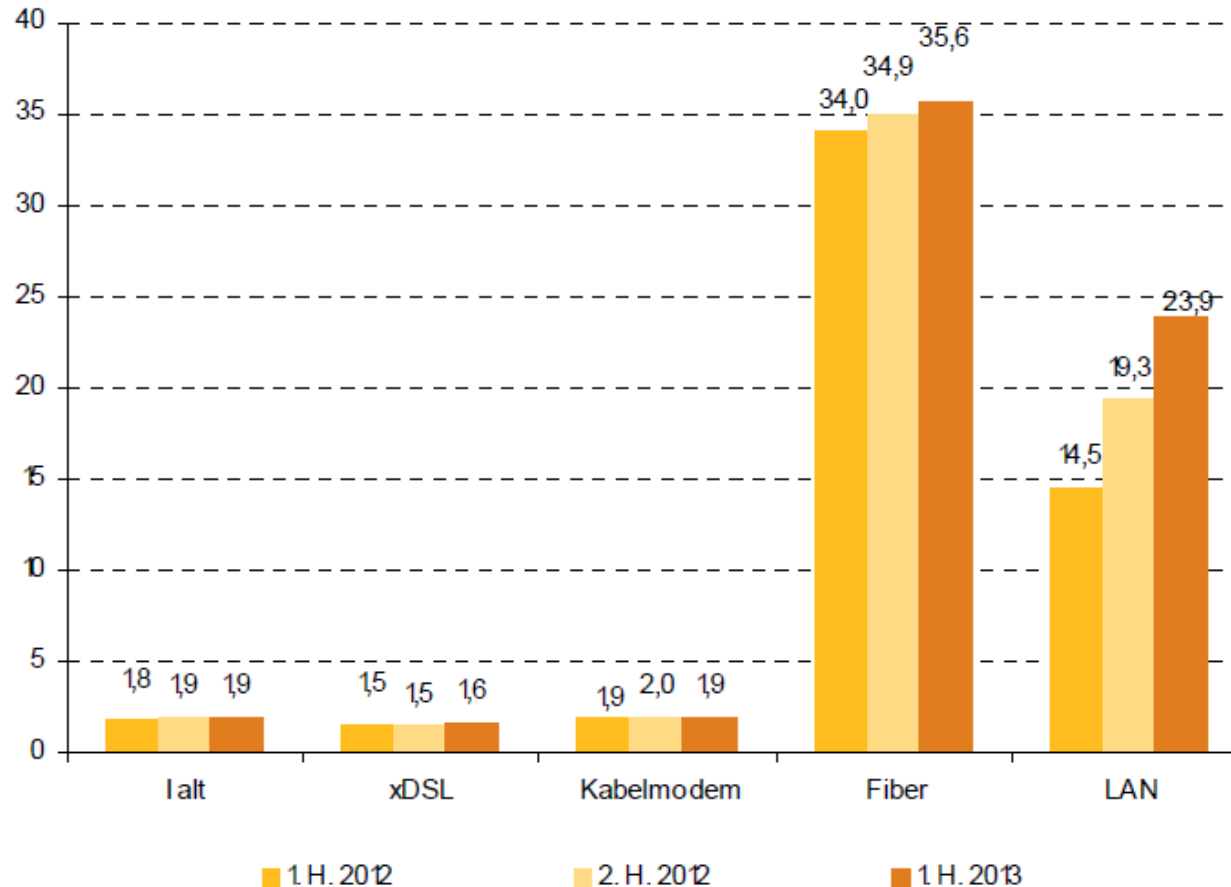
Fixed line broadband characteristics

	Technology	Maximum downstream capacity (Mbps/user)	Maximum upstream capacity (Mbps/user)	Line length	Capacity shared or dedicated between users
Copper	ADSL2+	24	1.5	up to 1.5 km	Dedicated capacity
	VDSL2	50	5	up to 400 meters	Dedicated capacity ²⁹
	Pair bonding	Capacity doubled	Capacity doubled	As above	Depends on where the active equipment is installed
	Vectoring	100	10	up to 400 meters	Shared capacity
	Phantom mode	300	N/A	up to 400 meters	
Cable TV	DOCSIS 3.0	960	100	up to 10 km	Shared capacity
	EuroDOCSIS 3.0	1,300	120	up to 10 km	
	Node split	Capacity doubled	Capacity doubled	up to 20 km	
	RFoG	160	120	up to 20 km	
	EPOC	10,000 (not standardized)	10,000 (not standardized)	up to 20 km	
	Higher modulation rates	N/A	N/A	up to 20 km	
	Allocating more channels	N/A	N/A	up to 20 km	
	DOCSIS 3.1	10,000	1,000	up to 20 km	
Fibre	P2P	100-1,000 (theoretically up to 50 Tbps)	100-1000 (theoretically up to 50 Tbps)	up to 20 km	Dedicated capacity
	GPON	10,000	2,500	up to 20 km	Shared capacity

Source: TERA Consultants

Upload speeds – copper versus fibre

Advertised speeds (Mbps), average – DSL, cable, FTTH and Fiber/LAN



Why does transparency matter?

- Highlight the advantages and value of FTTH
- Focus on quality differences – it's not only a price game
- Better price comparisons – 'value for money':
monthly subscription / download + upload = price per Mbps
- Educate consumers – 'superfast broadband' is not necessarily superfast
- Improve market position of new fibre entrants

Danish agreement on marketing of broadband speeds (1)

- Agreement between Consumer ombudsman, Consumer Council, telecom industry and energy association.
[\(official translation\)](#)
- Guidelines = soft law, compliance with Danish Marketing Practices Act / EU consumer and marketing law
- All types of broadband are included: DSL, cable (coax), fiber and mobile broadband
- Clear information on actual broadband speeds in all advertising, including internet, print media and TV

Danish agreement on marketing of broadband speeds (2)

- ‘Up to’ speeds are only allowed if minimum speed is not lower than half of the ‘up to’ speed. If not fulfilled, customer should have the option of cancelling
- Clear information geographical restrictions on speeds
- Clear information on upload speed
- Clear information on bandwidth consumption for IPTV, e.g. *‘4-6 Mbps per turned-on television’*
- Minimum speed and bandwidth consumption for IPTV must be given with same impact, and in close proximity, to advertised “Up to” speed

Danish agreement on marketing of broadband speeds (3)

- Shared capacity (**mainly cable**): If speed is not guaranteed, the provider must clearly indicate the speed normally to be expected by the consumer, taking into consideration the number of users sharing the relevant capacity (contention) during normal period (7 am until 1 am)
- **Mobile broadband:**
 - Speed marketed as expected speed, indicated as a speed interval (from/to) – ‘Up to’ speeds not allowed
 - Intervals based on statistical model
 - If speed can only be obtained during outdoor use, this fact must be clearly stated in the marketing with same impact as the information on the expected speed

Summing up on fixed line broadband

DSL

Up to 20/2 Mbps
Minimum speed 10/1 Mbps

DSL + IPTV

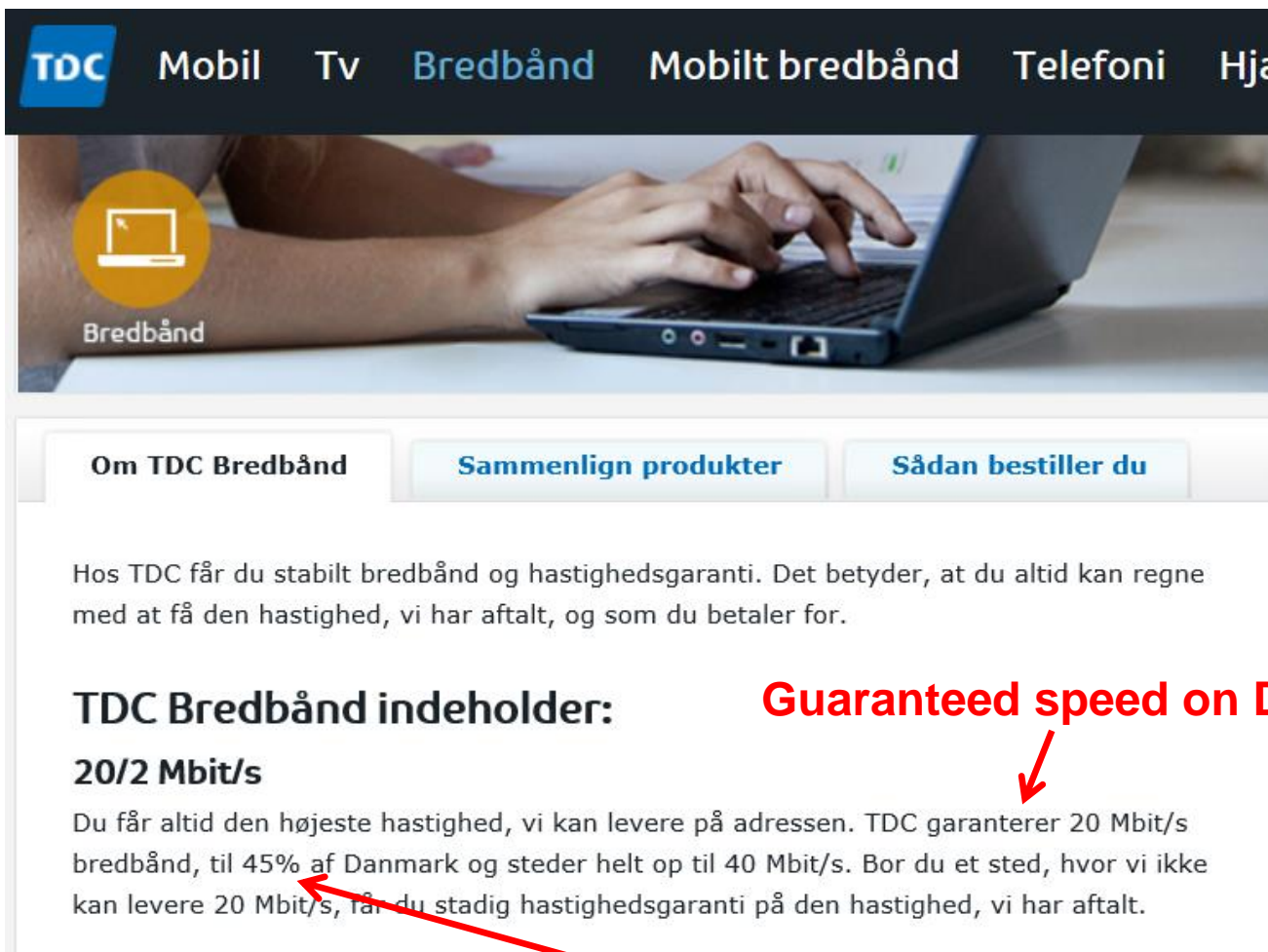
Up to 20/2 Mbps
Minimum speed 10/1 Mbps
TV requires 2,5 – 4 Mbps

Implementation: DSL – Telenor

op til 10 Mbit Bredbånd S	op til 20 Mbit Bredbånd M	op til 30 Mbit Bredbånd L	op til 50 Mbit Bredbånd XL
Min. hastighed: 2 Mbit Upload: 1 Mbit Inkl. WiFi router: 0 kr. Pris pr. md. 199 kr. Mindstepris 1.342 kr. Læs om prisen	1/2 pris i 3 mdr. Min. hastighed: 10 Mbit Upload: 2 Mbit Inkl. WiFi router: 0 kr. Pris pr. md. 125 kr. (De første 3 mdr.) Pris pr. md. 249 kr. (Efter 3 mdr.) Mindstepris 1.269 kr. Læs om prisen	Min. hastighed: 15 Mbit Upload: 5 Mbit Inkl. WiFi router: 0 kr. Pris pr. md. 269 kr. Mindstepris 1.762 kr. Læs om prisen	Min. hastighed: 25 Mbit Upload: 10 Mbit Inkl. WiFi router: 0 kr. Pris pr. md. 329 kr. Mindstepris 2.122 kr. Læs om prisen



Implementation: DSL – TDC (incumbent)



The screenshot shows the TDC website's broadband section. The navigation bar includes links for Mobil, Tv, Bredbånd, Mobilt bredbånd, Telefoni, and Hja. Below the navigation bar is a banner image of hands typing on a laptop, with a yellow circular icon containing a laptop symbol and the word 'Bredbånd' underneath. Below the banner are three buttons: 'Om TDC Bredbånd', 'Sammenlign produkter', and 'Sådan bestiller du'. The main text reads: 'Hos TDC får du stabilt bredbånd og hastighedsgaranti. Det betyder, at du altid kan regne med at få den hastighed, vi har aftalt, og som du betaler for.' Below this, it states 'TDC Bredbånd indeholder: 20/2 Mbit/s'. A red arrow points from the text 'Guaranteed speed on DSL !' to the '20/2 Mbit/s' text. Another red arrow points from the text 'But only to 45% of population !' to the main text paragraph.

TDC Mobil Tv Bredbånd Mobilt bredbånd Telefoni Hja

Bredbånd

Om TDC Bredbånd Sammenlign produkter Sådan bestiller du

Hos TDC får du stabilt bredbånd og hastighedsgaranti. Det betyder, at du altid kan regne med at få den hastighed, vi har aftalt, og som du betaler for.

TDC Bredbånd indeholder:

20/2 Mbit/s


Du får altid den højeste hastighed, vi kan levere på adressen. TDC garanterer 20 Mbit/s bredbånd, til 45% af Danmark og steder helt op til 40 Mbit/s. Bor du et sted, hvor vi ikke kan levere 20 Mbit/s, får du stadig hastighedsgaranti på den hastighed, vi har aftalt.



Guaranteed speed on DSL !

But only to 45% of population !

Implementation: DSL + IPTV – TDC (incumbent)



47 tv-kanaler, bredbånd og telefoni i én samlet pakke

DR/Bjarne Hermansen, TV2/Michael Poulsen, Discovery, Kanal4, Nickelodeon, Eurosport

HomeTrio TV Bredbånd Telefoni Fordele

47 tv-kanaler

Med TDC HomeTrio er der kanaler til hele familien; alle DR kanalerne, TV 2, TV 2 Zulu og TV 2 Charlie, til de mindste børn er der masse af børnekanaler og til teenagere er der serier og reality på Kanal 4, Kanal 5 og 6'eren. Se hvilke tv-kanaler du får med i [fanebladet "Tv"](#).

Lynhurtigt bredbånd

Lynhurtigt og stabilt bredbånd er inkluderet i TDC HomeTrio. Du kan ringe til os på tlf. 70 70 30 59, bestille en opringning eller gå ned i TDC butik og høre, hvilken hastighed vi kan levere på netop din adresse.

Telefoni - fastnet eller mobil

Telefoni kan være fastnet- eller mobiltelefoni. Når du vælger fastnettelefoni er det til fast lav samtalepris. Uanset hvor længe du taler, koster det kun 1 kr. pr. opkald til alle danske fastnetnumre. Vælger du mobiltelefoni er TDC Mobil 4 Timer inkluderet. Derudover får du 1 times ekstra tale og 3.000 SMS/MMS pr. måned med [TDC SamleFordele](#).

Sikker levering og installation

Oprettelsen af TDC HomeTrio er inkl. levering og installation. En TDC tekniker kommer ud til dig og sørger for, at dit bredbånd og tv installeres og han går ikke før det fungerer. Ca. 95% af alle danske husstande kan få tv fra TDC. [Sådan bestiller du](#).

Du kan også [sammenligne TDC HomeTrio med vores andre Trio-pakker](#).

TDC HomeTrio generelt

TDC HomeTrio binder i 6 måneder. Vi kan ikke levere overalt. Et tændtv trækker ml. 2,5 - 4 Mbit. Forudsætter tilmelding til e-mailkommunikation, ellers opkræves et gebyr på 20 kr./md., og betaling via Automatisk Kortbetaling. Betaling koster ellers 9,75 kr./regning via BS - eller 49 kr./regning via manuel betaling. Abonnementspris før 1.1.2014 er 514/519 kr./md. Se mere på [tdc.dk/prisstigning](#). 10 meter kabeltræk er med i oprettelsen. Pris pr. ekstra meter: 40 kr.

Prisoversigt

Vælg mellem fastnet- eller mobiltelefoni

☒ Fastnettelefoni
☐ Mobiltelefoni

TDC HomeTrio

47 kvalitets-tv-kanaler, lynhurtigt bredbånd og fastnettelefoni.

Inkl. trådløs router

543,-
Min. pris i 6 mdr. 4.257

ABONNEMENT	Betales månedligt
TDC HomeTrio	543 kr.
Trådløs router	0 kr.

OPRETTELSE	Betales én gang
Oprettelse	999 kr.

Abonnementspris før 1.1.2014 er 514 kr./md. Se mere på [tdc.dk/prisstigning](#)

Køb




Minimum speed and bandwidth consumption for IPTV is not given with same impact, and in close proximity, to advertised "Up to" speed

Implementation: cable broadband – YouSee (TDC, incumbent)

Vi skruer op for hastigheden!
Få ~~20/2 Mbit~~ 25/3 Mbit
for 249 kr. pr. md.

Inkl. Web-tv i Danmark med de fleste af dine tv-kanaler derhjemme.
Uden for hjemmet adgang til mange tv-kanaler på en enhed ad gangen. Fair use 600 GB/md. Priser v/BS (ellers tillæg på 39 kr./regning). Fås ikke overalt. Se yousee.dk/bredbaandsaftale.

 Se hvilke produkter, du kan få på din adresse.

Bredbånd Se alle fordelene

10 Mbit	25 Mbit	50 Mbit	100 Mbit
1 Mbit upload	3 Mbit upload	5 Mbit upload	10 Mbit upload
199 kr./md.	249 kr./md.	299 kr./md.	399 kr./md.



No information on expected speed based on shared capacity

Implementation: Mobile broadband – 3 (Hi3G)

MOBILT BREDBÅND

✓ Fuld hastighed på alle abonnementer ✓ Ingen binding ✓ Fri fragt

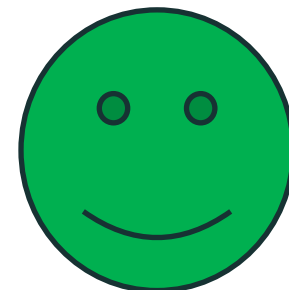
4G/LTE

1 GB 3's net i Sverige	10 GB 3's net i Sverige	40 GB 3DataDeling 3's net i Sverige	200 GB 3's net i Sverige	FRI DATA inkl. 1000 GB 3's net i Sverige
69,- pr. md.	129,- pr. md.	249,- pr. md.	299,- pr. md.	399,- pr. md.
Oprettelse: 99,- Min. pris 1. md.: 168,-	Oprettelse: 99,- Min. pris 1. md.: 228,-	Oprettelse: 99,- Min. pris 1. md.: 348,-	Oprettelse: 99,- Min. pris 1. md.: 398,-	Oprettelse: 99,- Min. pris 1. md.: 498,-
Vælg	Vælg	Vælg	Vælg	Vælg

FORVENTET HASTIGHED VED UDENDØRS BRUG:

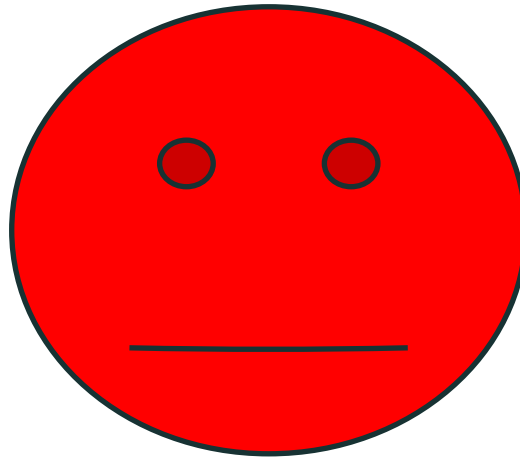
4G/LTE download: 8 - 35 Mbit/s 4G/LTE upload: 2 - 24 Mbit/s 3G download: 4 - 20 Mbit/s 3G upload: 1 - 4 Mbit/s

Vi dækker mere end 60% af Danmarks befolkning med 4G/LTE



Expected speed interval, precondition: outdoor use

Implementation: summing up



EU recommendation on consumer transparency

Vice-President Kroes, May 2012



“...Given that BEREC's findings highlight a problem of effective consumer choice, I will prepare recommendations to generate more real choices and end the net neutrality waiting game in Europe.

First, consumers need clear information on actual, real-life broadband speeds. Not just the speed at 3 am, but the speed at peak times. The upload as well as the download speed. The minimum speed, if applicable. And the speed you'll get when you're also watching IPTV as part of your triple-play bundle, or downloading a video on demand via a premium "managed" service. Plus, you should know what those advertised speeds typically allow you to do online...”

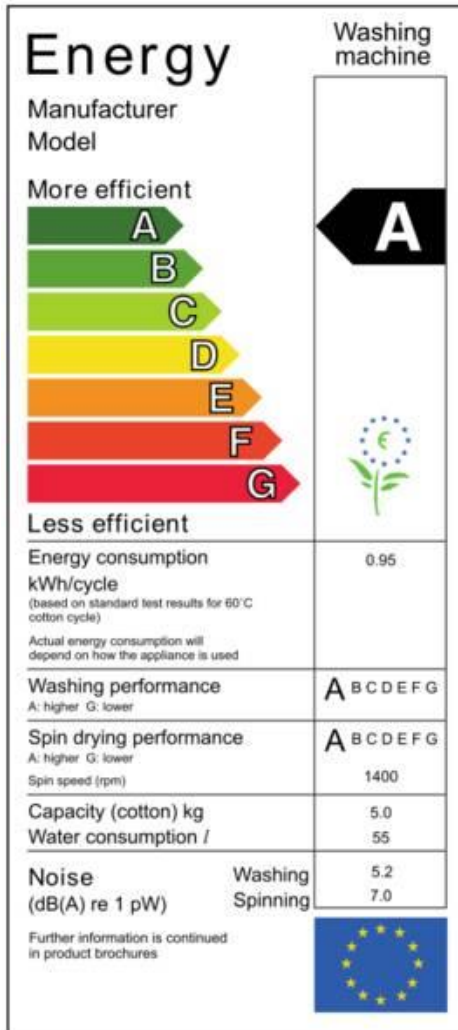
Connected Continent – Sept. 2013



- Major discrepancies between advertised speeds and actual speeds on fixed networks
- On average, consumers receive only 74% of the advertised headline speed they have paid for (SamKnows Phase 1 study, June 2013)
- Solutions offered
 - **Public and contractual information** on average speeds during normal and peak times, data volumes
 - NRA will monitor QoS and impose minimum quality requirements, under Commission control
 - Consumers can terminate their contract if there is a significant discrepancy on advertised and actual speed

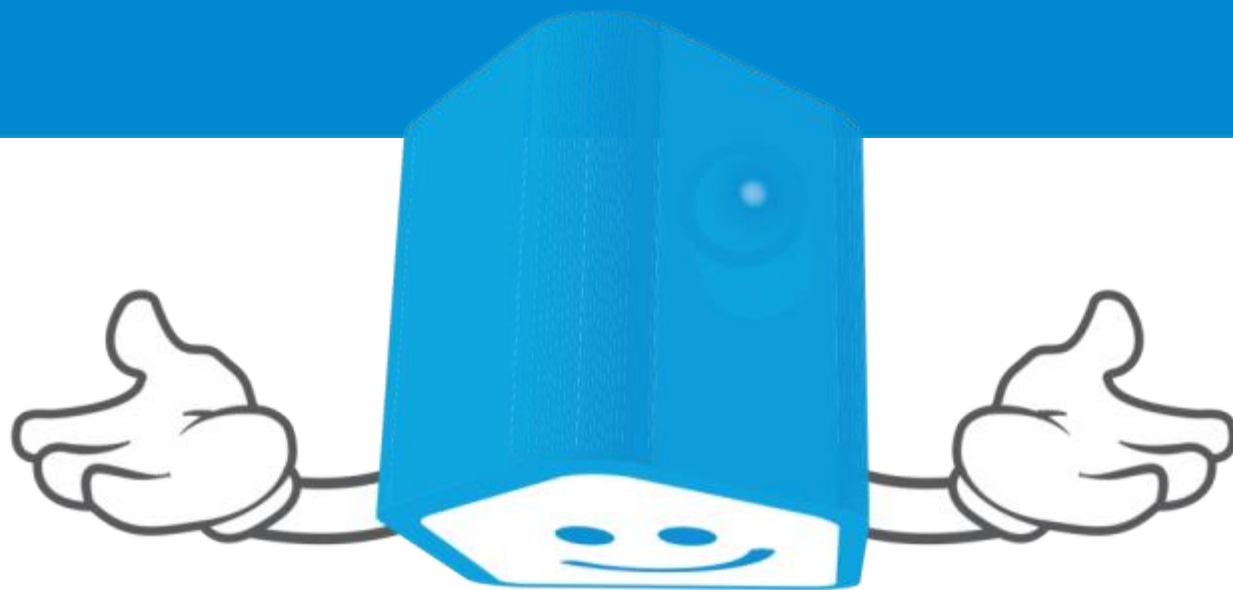
→ A step in the right direction but it will give providers too much room to suppress critical information on vital quality aspects in advertisement

EU declaration on broadband quality and speeds?



- Look at energy efficiency declarations on consumer appliances
- Full transparency, ease comparisons
- Educating consumers very effectively and has been a great success
- Difficult to find a refrigerator today which is not “A”
- Don’t forget data caps and latency!!!

Q&A



www.ftthcouncil.eu

