EU broadband markets are fiercely competitive
• Broadband retail prices in the EU have decreased drastically, driven by competition
• The average price paid for a fixed broadband service bundle (e.g. triple-play) declined by about 5 euro in the first half of 2010 while access speeds continue to increase
• Strong competitive forces acting on next generation fibre include cable and future mobile internet (EU Commission, MEMO/10/424 Brussels, 20 September 2010)

Investment in high-speed next generation networks – Europe needs to catch up to achieve broadband targets
• EU ICT sector requires major investment in next generation fixed and mobile high-speed networks in the coming years
• European Commission’s Digital Agenda sets ambitious targets for high-speed broadband availability by 2020
• Investment in smart NGNs depends upon network operators’ freedom to innovate and develop new business models in line with EU competition and consumer protection rules
Telcos have a number of unique digital assets that could be efficiently used as enablers, QoS being one of them.

The 2010 German spectrum auction – An example of optimizing the use of current spectrum supplies

Spectrum auctions – lessons learned from the German auction

DT Key Messaging in the EU Consultation on NN

The 2010 German spectrum auction
Starting position

On April 12, 2010 the German regulator (Bundesnetzagentur, BNetzA) started the auction of additional spectrum for the German mobile telecom market

- A total of close to 359 MHz was being offered, which actually exceeded the current total of available spectrum in the market. Among other allocations (including 41 blocks of overall 358.8 MHz of spectrum split between four bands (80 MHz around the 800 MHz band, 50 MHz (1.8 GHz band), 58.8 MHz (2 GHz band) and the largest part of 190 MHz around the 2.6 GHz band)
- Auction participants were the four established network operators: T-Mobile, Vodafone, O2 (Telefonica) and E-Plus (KPN)
- The BNetzA emphasized competition aspects: (i) spectrum allocation via auction means choosing a competitive mechanism; (ii) this is a pre-requisite to provide unrestricted internet access under competitive conditions
- Spectrum in the 800 MHz band ("digital dividend") received a lot of attention due to its very good propagation characteristics and its suitability for the roll-out of mobile broadband in rural and other hard-to-reach areas
- Operators acquiring spectrum in the 800 MHz band are required to prioritize the coverage of rural areas, to fulfill the government’s promise of nation-wide broadband internet coverage
- Germany was the first European country to auction off the digital dividend

Results of the German spectrum auction
360 MHz awarded for €4.4bn

DT Key Messaging in the EU Consultation on NN

- Deutsche Telekom is committed to the Open Internet and to “net freedoms”.
- The introduction of QoS-differentiation supports these goals.
- Today’s “best effort” internet will continue to exist in a managed NGN
- Customer transparency will be the key to success in the market place
- Regulatory intervention in competitive markets would create distortions
- The current EU regulatory framework safeguards the Open Internet
- QoS-differentiation and price differentiation will contribute to financing the roll out of broadband infrastructure
- Competition will not only lead to better quality and individually tailored offers but safeguard a diverse and affordable internet experience
Auction design and key provisions in a nutshell

OVERVIEW: KEY FEATURES
- Design: BNetzA chose a ‘simultaneous ascending auction’ design, i.e. bids on individual lots until no more bids
- Coverage obligations: prioritize coverage of rural areas (800 MHz band)
- Generic vs. specific lots: 32 blocks are awarded specifically, 4 blocks generically
- Bidding right restrictions apply for spectrum in the 800 MHz band
- Essential spectrum package: designed to encourage participation of new entrants
- Activity rule ensures smooth progress
- Incremental bids may be helpful to handle complex situations
- Information policy: full transparency; bidders see all bids on each block
- Termination rule: in final phase and no new

Coverage obligations: bidders acquiring spectrum in the 800 MHz band have to prioritize rural areas

COVERAGE OBLIGATIONS 800 MHz
- Federal broadband initiative: provide nation-wide broadband coverage by end of 2010
- 800 MHz spectrum: good propagation characteristics
- Acquisition of spectrum in the 800 MHz band implies coverage obligations must be observed
- Small communities need to be served first (see scheme)
- Federal states have provided exhaustive lists of communities for each category
- Reporting obligations for spectrum holders (yearly)

Results of the German spectrum auction
360 MHz awarded for €4.4bn