Recent developments in access in telecoms

CERRE Workshop on access pricing in regulated sectors

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Ulrich Stumpf

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Them of the presentation

- What Next Generation Access („NGA“) changes:
  - the architecture & technology of the incumbent access network
  - The location and number of (some) points of access
  - The pricing of access

NGA changes the architecture and technology of the incumbent access network

- Fiber (FTTN, FTTH/B) replaces copper
- >30 Mbps technologies (VDSL, FTTH) replace ADSL
- Number of network nodes decreases
- This has implications for access points and for the scope of relevant access products
- Need for transparent migration paths from legacy to NGA access (NGA Recommendation)
- BUT note: lower density areas will continute to be served by copper networks for some time to come

NGA changes the points of access

- Points of access to FTTN/VDSL networks
  - Bitstream access at a national and/or regional PoPs, as before
  - As copper ULL disappears, ANOs should be able to migrate to the unbundled copper sub-loop (NGA Recommendation)
  - BUT: Business case for sub-loop unbundling only in areas with highest density of customers
  - AND: Sub-loop unbundling compromises higher speeds if VDSL vectoring is employed
  - HENCE: Need for a new local access product (at MPoP or ex-MDF). Should it be VULA, or local bitstream, or both?
  - So far,both sub-loop and regional VDSL bitstream numbers are zero or *de minimis* (except VDSL bitstream in Germany)

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NGA changes the points of access

- Points of access to FTTH networks
  - Bitstream access at a national and/or regional PoP, as before
  - As copper ULL disappears, ANOs should be able to migrate to fibre ULL at MPoP (NGA Recommendation)
  - BUT: Only P2P (not GPON) networks can be unbundled at the MPoP
  - In case of GPON, could ANOs migrate to unbundled fibre sub-loop at concentration point/terminating segment (as required by NGA Recommendation)?
  - NOT REALLY: Business case for concentration point unbundling only in areas with highest density of customers
  - HENCE, ONCE AGAIN, need for a new local access product (at MPoP). VULA, or local bitstream, or both?
  - So far, fibre unbundling and (regional) fibre bitstream numbers are zero or *de minimis* (except Netherlands/MPoP unbundling and France/terminating segment)

NGA changes the pricing of access

- Pricing of access to copper/ADSL networks
  - Traditionally retail-minus for bitstream plus cost orientation (FL-LRIC) for copper ULL
  - Complexity of retail-minus led NRAs to implement cost orientation also for bitstream
  - Doubts about FL-LRIC for copper ULL: Will lead to a (significant) over-recovery of costs given the actual lifetime of the copper access network and its status of depreciation. This could provide a negative incentive for NGA investment.
  - Forthcoming Costing Recommendation seeks an answer
    - Keep copper ULL prices at current level, but only <u>if</u> incumbents commit to NGA investment?
    - Replace FL-LRIC standard by SRIC+ (which would be the short-run cost of maintaining the copper network plus an opportunity cost component reflecting consumers' valuation of the network to be determined on the basis of incentive pricing)?.
  - Deaveraging of ULL prices (in some regions, copper ULL will remain in place)

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NGA changes the pricing of access

- Pricing of access to FTTN/VDSL networks
  - Cost orientation for both sub-loop unbundling and bitstream (NGA Recommendation), presumably LRIC
  - Retail-minus or other standard acceptable if there are sufficient competitive constraints on the downstream retail arm of the SMP operator or there is equivalence of access (NGA Recommendation)
  - If VULA is to be a substitute for physical unbundling, pricing should be similar to pricing of physical infrastructure

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NGA changes the pricing of access

- Pricing of access to FTTH
  - Cost orientation for fibre unbundling and bitstream (NGA Recommendation), presumably LRIC
  - Fibre unbundling
    - Cost orientation with risk premium in WACC for „additional and quantifiable“ investment risk (NGA Recommendation): Would imply FL-LRIC for the fibre part, but Brownfield approach for the duct part
    - Incentives for risk sharing (NGA Recommendation). Discounts for up-front commitments on long-term contracts and volume to reflect the reduction of risk for the investor
    - Volume discount per area with one level - should strike a balance between the necessary scale for a new entrant and the need to ensure a 4(?)-player market. (NGA Recommendation)
  - Discounted access prices should not squeeze margins of a reasonably efficient competitor (in practice: access price should be the lower of LRIC and retail-minus)

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Ulrich Stumpf
wik-Consult GmbH
Postfach 2000
53588 Bad Honnef
eMail u.stumpf@wik-consult.com
www. wik-consult.com