



**Swisscom response to the Commission Consultation on the
Draft Recommendation on Regulated Access to Next Generation Access Networks (NGA)**

The European Commission has issued a draft recommendation on the Regulated Access to Next Generation Access Networks (NGA).

Swisscom is Switzerland's leading telecoms provider, has 5.3 million mobile customers; around 3.7 million fixed lines and 1.7 million broadband connections.

Swisscom has a presence throughout Switzerland and offers a full range of products and services for mobile, landline and IP-based voice and data communication. Massive investments in network infrastructure ensure that this will remain the case in the future. Since the launch of Bluewin TV, customers have become increasingly aware of the trend towards multimedia. Swisscom is active in one of the most attractive broadband markets in Europe via the Italian provider Fastweb. Swisscom also offers services for IT infrastructure outsourcing as well as the management of communications infrastructures.

The overall objective of the draft recommendation on the Regulated Access to Next Generation Access Networks (NGA) is to foster the application of consistent regulatory remedies to SMP operators throughout the EU. 80% of Swisscom's turnover is generated inside Switzerland. Despite the fact that Swisscom is not affected by the EU recommendation in its core business, we take the opportunity of the consultation on the draft recommendation on the Regulated Access to Next Generation Access Networks (NGA) to comment on this topic of crucial importance to all operators in Europe. Swisscom has developed a FTTH model that might bring a solution to most of the problems raised by the European Commission in the NGA recommendation.

In the following we will first describe the model. This will allow us then in a second stage to make some remarks on the regulatory approach outlined in the draft recommendation.

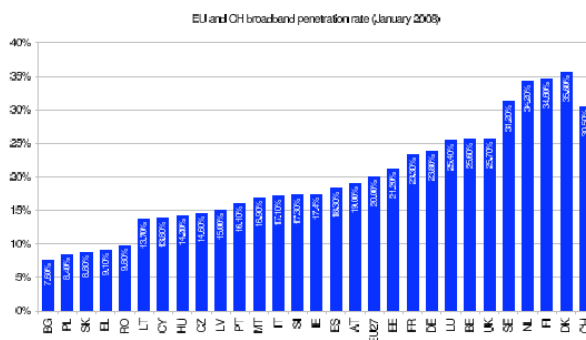
1 Swiss Context

Switzerland has a high broadband penetration. Was Switzerland part of the European Union, it would be in top position 5 in terms of broadband penetration according to the implementation report extended by our regulator.

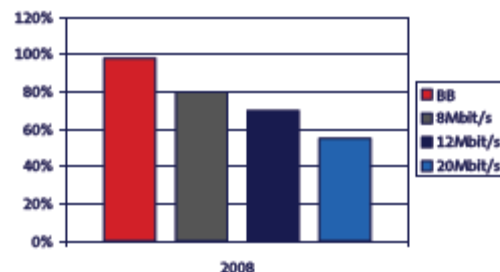
The Swiss Broadband market is characterised by high infrastructure competition. Cable has 80 % BB-enabled coverage. The market share of cable in the Broadband market is 30%. 18% of the DSL market is provided by alternative operators to Swisscom.

In Swisscom's wireline Broadband network, the transmitted data volumes double every 4 months. Therefore Swisscom has continuously upgraded its network. Since 2001, Swisscom has deployed ADSL permitting bandwidths of up to 5Mbit/s. Since 2006, Swisscom has deployed VDSL, VDSL attaining 80% of our BB network and permitting 50 Mbit/s.

At the moment, more than 98% of all Swiss households now have access to broadband. More than 75% of households benefit from a speed higher than 12 Mbit/s, almost 60% from a bandwidth of 20 Mbit/s.



Because of the constant increase in demand in bandwidths upgrading the existing network will not be sufficient. Swisscom is therefore deploying FTTH. With the spread of the optical-fibre networks to homes, speeds of 100 Mbit/s and more will be possible in the medium to long term. With the higher bandwidths Swisscom customers can watch high-definition TV (HDTV) on several sets while working at home and surfing the Net at the speed of light. The expansion of FTTH is beginning in larger and mid-sized cities and towns, starting in Zurich, Basel and Geneva.



We do not think that there will be a single killer application linked to FTTH. We assume that the BB market will evolve like the mobile market when passing towards 3G. A number of new applications will change our way of living. One example: FTTH will enable virtual presence. As FTTH will make telepresence possible, our customer might for example have dinner together with his/her partner despite physical distance as high definition screens and symmetrical transmission speeds will enable a video chatting in a high definition resolution with no delays. More examples of future applications can be found under http://www.swisscom.com/GHQ/content/Media/Medienmitteilungen/2008/20080403_01_Zukunft_Telekommunikation.htm?lang=en.

2 Swisscom's FTTH Model as a solution to the problem

Swisscom is planning FTTH deployment because of competitive pressure coming from the utility companies as well as the cable operators that will deploy Docsis 3.0.

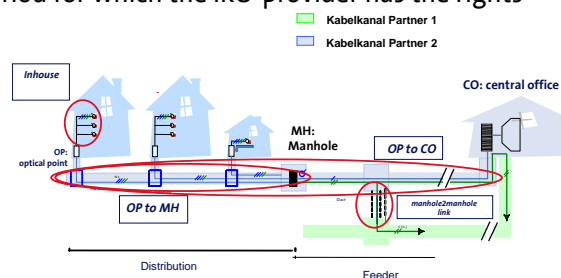
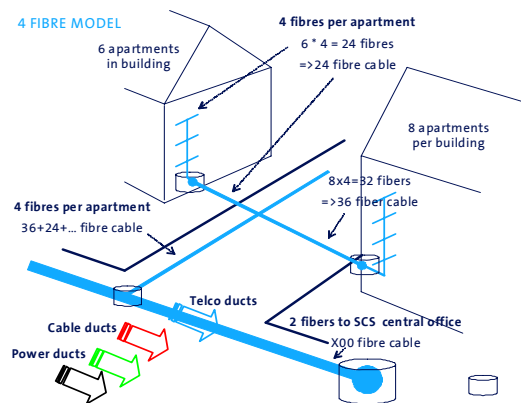
For FTTH, Swisscom has chosen a multi-fiber architecture which foresees spare capacity for alternative operators. Swisscom will foresee four times more capacity than needed for its own purposes in

- the vertical cabling and
- the capillary cabling,

while deploying 2*times more in the part between the manhole and the Optical distribution frame (ODF). Out of the four fiber connections one will be kept for Swisscom while the three other fiber connections can be acquired by the alternative operators as IRUs (indefeasible rights of use). The IRUs will cover either of the different periods: the amortization of the IRUs by the IRU taker, the physical life time of the fiber, or the period for which the IRU-provider has the rights of way for the infrastructure in question.

Swisscom proposes these contracts on a regional basis. Different cooperation models are possible:

- cooperation for the inhouse cabling
- cooperation for the part between the optical point and the manhole

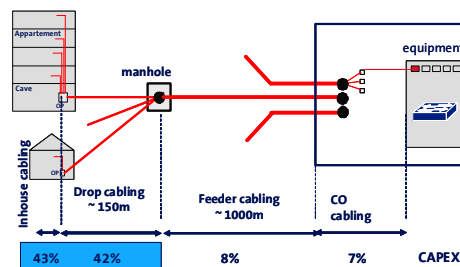


- cooperation for the part between the optical point and the central office
- cooperation for the manhole to manhole link

Swisscom has chosen a point-to-point (P2P) technology. Swisscom will not dictate the technology of its cooperation partners. The cooperation partners can deploy either P2P or GPON according to their needs.

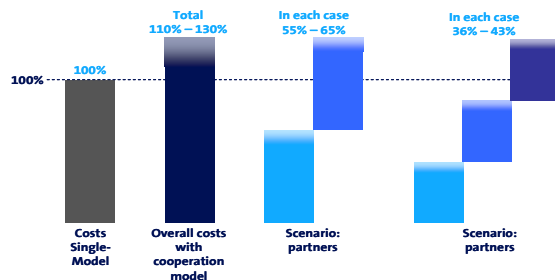
In contrast to a mono-infrastructure, this multi-fiber architecture allows a differentiation of the different operators concerning their business models.

The section between the home plug and the manhole represents 80 % of the overall cost of the NGAN. A multi-fiber architecture in this section is giving a solution to the replicability of network question.



The extra cost of deploying 4 instead of 1 fiber is limited to 10% to 20% of a build with one single fiber.

Most of that overcost occurs in the section of the network between the manhole and the central office where cables are thick because of the higher fiber concentration. In the section between the plug in the home and the manhole, the lower density of apartments makes the costs of 4 fiber equivalent to the cost of laying a single fiber. Most of the overcost relies in cost of materials, extra splicing, and extra digging required in specific spots where there is no available space in ducts.



This is true for all countries where there are existing ducts available for re-use (France, UK, Germany...). If there are no ducts and cables are being laid directly in the ground, the overcost is even more limited.

This overcost is justified by the fact that the CAPEX will be reduced for Swisscom, because they are the dividable by the number of operators cooperating. The model also has macroeconomic benefits, as the model reduces the overall costs of the FTTH roll-out.

Swisscom thinks that the multi-fiber model is the solution to the problem that telecom networks contained till now, this is the natural monopoly of the single-copper architectures. The exclusivity and rivalry of use disappears because of the fact that different operators can use the same architecture at the same time.

Competition limited to services will hamper innovation and precludes the development of new innovative ultra high broadband services needed to make the business case of fiber attractive in the longer term.

In addition it is to be noted that in an infrastructure-based competition world, there is room for neutral wholesale access services providers while the opposite is not true : in a competition limited to services world, there is no room for an infra based services provider.

A multi-fiber architecture should go into the direction the EU wants to go, this is infrastructure competition, as infrastructure competition is more sustainable in the long term as service based competition. Competition on the services level could lead to the re-establishment of a monopoly in the access if no other parallel infrastructures are available.



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In summary:

- Swisscom deploys 4 fibres instead of 1. Different technologies (P2P or GPON) are deployable over these fibre connections.
- Swisscom gives IRUs per zones or blocs of subscribers.
- The alternative operator therefore invests and shares the risk with Swisscom.
- Swisscom has its own ducts. We can offer this cooperation in whole Switzerland.
- The alternative operators have the possibility to differentiate themselves, as in our model, they are the once that light up their own fibre.
- A multi-fibre architecture as foreseen by Swisscom will foster competition.
- By sharing part of the deployment costs, Swisscom reduces its CAPEX.
- The model has positive effects for Swisscom's shareholders.
- The fact that we go far in the cooperation allows to minimise the GLOBAL cost of deploying fibre (avoid that two cables are put down towards the same building).
- This has positive effects for the consumers.

3 Comments on the NGA recommendation

3.1 Architecture matters, has different competitive outcomes, needs different regulatory responses and should be addressed in the recommendation

Swisscom would like to highlight that network architectures and technologies do influence the market outcome which needs to be taken into account in the NRA's regulatory response following the FTTH roll-out.

A multi-fibre architecture as foreseen by Swisscom will allow infrastructure competition between different operators. In a multi-fibre architecture, cooperation on the passive infrastructure allows competition between the operators on higher layers in the network. The multi-fibre architecture allows operators to differentiate themselves and compete. In a single architecture model, this competition is not possible.

The explanatory memorandum distinguishes between technologies (P2P or GPON). Swisscom thinks that not only different technologies but also different architectures have different competitive outcomes and need different regulatory responses. Swisscom would advise to acknowledge the impact of different architectures on the competitive outcome in the market not only in the explanatory memorandum but also in the recommendation (paragraphs 13-15). The NGA recommendation assumes in paragraphs 13, 14 and 15 a single-fibre architecture between the Optical point and the ODF (central office). We think that a multi-fibre architecture should be taken into account in the draft NGA recommendation.

Therefore in paragraph 13 of the NGA recommendation, the Commission should not only foresee that "NRAs should facilitate cooperation regarding the roll-out and sharing of NGA infrastructure within buildings" but also in the infrastructure between the building and the ODF (central office.)

Swisscom's proposed plans to roll out multiple pairs to each home in Switzerland and thus to insure a form of infrastructure competition should allow not to unbundle the fibre.

In Paragraph 14, the draft recommendation assumes that the alternative operator deploys its own fibre till the concentration point. A cooperative multi-fibre architecture constructed in an investment sharing approach between the incumbent and the alternative operator for the part from the apartment to the central office does not seem to be addressed when access obligations at the concentration point are recommended. In addition to this we think that sub-loop unbundling would not be the correct regulatory



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response to multi fibre models that do not only cover the in-house-cabling but also the part between the building and the ODF.

Paragraph 15 recommends that “where SMP operators deploy fibre to the home, NRAs should impose further physical access obligations (access to unlit fibre) beyond access to ducts, other civil engineering works and other elements which are not active”. In a multi-fibre model the alternative operator has the possibility to invest in IRUs for one of the fibre connections from the ODF to the building. We assume that in this case, the NRA would not impose physical access obligations.

The Commission’s SMP Guidelines state that: “NRAs will conduct a forward looking structural evaluation of the relevant market, based on existing market conditions. NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable, by taking into account expected or foreseeable market developments over the course of a reasonable period....”

We would assume that a multi-fibre architecture that allows operators to differentiate themselves and compete against each other will be assessed by the competition authority by considering a forward looking structural evaluation of the relevant market.

If the free play of industry players, this is the commercial negotiations between the potential investors, leads to the roll-out of single-fibre architectures in the access networks and the constitution of potentially monopolistic infrastructures, one might even consider a scenario in which the regulator could intervene to impose a multi-fibre architecture, without intervening into the risk sharing agreements themselves.

3.2 If ducts are opened up, all ducts (not only telco ducts) should be considered

The draft recommendation foresees in paragraph 4 “Where NRAs find that one or more operators have SMP in Market 4 (including shared or fully unbundled access), they should mandate access to new and existing ducts (with associated measures and processes necessary to ensure access is effective), civil engineering works and other elements which are not active, necessary for the roll-out of competing infrastructure, and in particular of fibre, street cabinets or an optical equivalent.”

As Market 4 is defined as “Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location.” the proposal contained in the draft NGA recommendation boils down to regulating the ducts of the telecom operators but excluding the ducts of all other duct owners from the regulation.

If however the approach of the Commission comes to the conclusion that the operator in market 4 has SMP and therefore limits regulation to ducts of the SMP operator in the telecoms market, the regulation of these ducts should be done on the basis of current costs/LRIC. If there is SMP statement because of a limitation of the market definition, a simulation of a competitive market is the objective of regulation. Current costs are more efficient for this simulation and therefore for non-distortive price regulation than historical costs.

The LRIC method is based on the economic principle that correct investment decisions are made based on current costs. As regulation tries to simulate a situation where operators compete and make efficient investment decisions, the regulated prices should therefore be determined by calculating the costs that a provider would incur to provide the service in the long term based on the current situation. Therefore – if regulation is limited to the SMP operator (this is: the telecommunications operator owning ducts) also for existing ducts, the LRIC method needs to be applied.

3.3 Risk sharing agreements instead of access regulation

The Swisscom multi-fibre model is a risk sharing model. We are sensitive to the issues concerning access and the complexities that have to be tackled here. On the other hand, the possibility of risk sharing agreements puts the alternative operators as well as the incumbent into the position to stabilize their business cases. On the other hand it pushes the investors to a long term decision to invest in NGAs or not.

Risk sharing and access regulation exclude each other. The prospects of possible access regulation give the alternative operators an incentive not to enter into risk sharing arrangements and therefore threaten the development of risk sharing agreements and in the case of Switzerland it would threaten infrastructure competition.

Swisscom does see the risk sharing agreements as a commercial contract between the alternative operators and itself for the life time of the fibre. We think that these IRUs give the opportunity to the players in the market to have a stable business case. This stability should not be jeopardised by the regulator's threat to regulate. Access regulation in practice varies over time. Access regulation does not permit a long term perspective. It impedes a stable business case for neither party to the agreement.

3.4 Geographic segmentation

The Swiss law foresees comparable markets to market 4 and 5 of the relevant market recommendation of the EU. Swisscom would like to express its agreement with the European Commission that subnational markets would have to be looked at. Considering the fact that FTTH will be deployed mainly in urban cities in the first step, a one-size-fits-all approach national market analysis does not seem to be justified in this case. Market dynamics concerning FTTH are different than for the rest of the FTTx deployment and this would have to be taken into account. In the Swiss market, the first movers in the FTTH market are the utility companies. This seems to echo the situation in Sweden and Denmark. A national approach to market definition may fail to capture adequately the competitive constraints operating on supply in a particular geographic area.

Market definition is not an end in itself. The definition of the scope of the relevant economic market is carried out in order to identify the products and the geographic area over which an assessment can be made of operators' ability to act to an appreciable extent independently of competitors, customers and consumers i.e. whether there are any operators that hold a position of SMP within a particular market. We think that new market players like utility companies investing in FTTH can leverage their market power in the FTTH market and that this has to be taken into account.

As FTTH is deployed locally in a first step, it makes sense to make an assessment of sub-national markets.

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