Croatia – Experience with Regulation of Broadband Markets

Croatian Post and Electronic Communications Agency - HAKOM -

Sarajevo, 5th of November, 2010
Experience with regulation of broadband markets

- Market 4
- Market 5

Experience after market analysis decisions
17th of July, 2009 - HAKOM Council decisions on Market analysis of following markets:

- Wholesale (physical) access to the network infrastructure, including shared and full unbundled access, at fixed location
  - Market 4

- Wholesale broadband access
  - Market 5
Wholesale (physical) access to the network infrastructure, including shared and full unbundled access, at fixed location

Market 4
Market Definition

SMP Assessment

Remedies Imposed
Market Definition

**Relevant product/service market**
- full and shared Local Loop Unbundling (LLU) – copper pair
- full and shared sub-loop unbundling (SLU)
- fiber unbundling – Point-to-Point (P2P)
- access to the network infrastructure – **incumbents’ self supply**
- collocation – physical, remote and virtual

**Passive Optical Network (PON) excluded**

*not technically feasible in timeframe of this analysis*

**Relevant geographic market**
- national territory of Republic Croatia
Market Definition

SMP Assessment

Remedies Imposed
Based on following criteria:

- 100% market share
- Control of infrastructure not easily duplicated
- Economies of scale
- Economies of scope
- Low countervailing buyer power
- Vertical integration

HT is designated as SMP
Market Definition

SMP Assessment

Remedies Imposed
Remedies Imposed 1(9)

- Access to and use of specific resources networks
- Non-discrimination
- Transparency
- Price control and cost accounting
- Accounting separation
Access to and use of specific resources networks

- HT is obliged to provide on reasonable request access to:
  - full and shared Local Loop Unbundling (LLU) – copper pair
  - full and shared SLU
  - fiber LLU – P2P

- **HT is obliged not to withdraw access to facilities already granted**

- **HT is obliged to ensure mutual usage of space and electronic communications infrastructure**
Access to and use of specific resources networks

SLU has to be provided in two ways:

- where HT installed own street cabinet - HT has to provide:
  - space in street cabinet for SLU
  - access to ducts – according to Electronic Communications Act
  - access to dark fiber – in case there is no place in ducts
  - access to WWDM – in case there is no dark fiber available

- operators can install own street cabinet in some point of HT’s access network, in accordance to their business plan – irrelevant if HT has installed its own cabinet there
  - more viable for the new wireline operators
Access to and use of specific resources networks

- HT is obliged to ensure **basic Service Level Agreement (SLA)**

- HT is obliged to inform HAKOM on every **advanced SLA** agreed – in order to enable HAKOM to monitor the appliance of non-discrimination
Non-discrimination

- HT is obliged to apply *equivalent conditions in equivalent circumstances* to other undertakings providing equivalent services.

- HT is obliged to *provide services and information* to others under the *same conditions and of the same quality* as it provides for its own services, or those from its subsidiaries and partners.

- HT should provide information on planned modifications in network at least *1 year in advance*.

- HT should provide information on planned de-commissioning of complete copper access network at least *5 years in advance*.
HT is obliged to publish reference offer for services included in relevant market:

- **LLU – copper pair** until 1st of October, 2009
- **SLU** within 90 days from the reasonable request*
- **LLU - fiber (P2P)** within 90 days from the reasonable request*

*reasonable request*
- SMP operators evaluate what is reasonable request according to non-discrimination and technical possibilities of their network
- in case of dispute – HAKOM decides if the request is reasonable
Remedies Imposed 7(9)

Transparency

- HT is obliged to deliver quarterly, or on request, detailed report on performance indicators (KPIs) to HAKOM

- HT is obliged to provide to HAKOM and to the other Other License Operators (OLOs) with access to the database that is used for calculation and storage of KPIs
**Price control and cost accounting**

<table>
<thead>
<tr>
<th>LLU monthly fee – copper pair</th>
<th>full LLU</th>
<th>shared LLU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7,27€*</td>
<td>2,99€*</td>
</tr>
<tr>
<td></td>
<td>(unmodified)</td>
<td>(decreased - based on benchmark)</td>
</tr>
</tbody>
</table>

* 1€=7,1748 HRK – average exchange rate in period July – December 2008

- price for shared LLU - new price from 1st October, 2010, in accordance to the methodology (benchmark) written in analysis and the latest data – 2,53 €

<table>
<thead>
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<th>SLU monthly fee</th>
<th>within 90 days from the reasonable request HT is obliged to offer reasonable price</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>LLU fibre (P2P) monthly fee</th>
<th>within 90 days from the reasonable request HT is obliged to offer reasonable price</th>
</tr>
</thead>
</table>
HAKOM Council on 18th of November, 2008, ordered HT the way of performing the accounting separation and cost accounting, in a way and terms defined in the document “Accounting separation and cost accounting instructions” under segment 3 – Wholesale network infrastructure access (including full and share access) at a fixed location
Wholesale Broadband Access

Market 5
Wholesale Broadband Access

Market Definition

SMP Assessment

Remedies Imposed
**Market Definition**

**Relevant product/service market**

- *bitstream* service regardless of the access technology to the end user used (copper / copper + fiber / fiber)
  - IP level
  - Ethernet level
  - DSLAM/OLT or corresponding level
- ADSL – incumbents’ self supply

**Relevant geographic market**

- national territory of Republic Croatia
Wholesale Broadband Access

- Market Definition

- SMP Assessment

- Remedies Imposed
HT is designated as SMP based on the following criteria:

- 100% market share
- Control of infrastructure not easily duplicated
- Economies of scale
- Economies of scope
- Low countervailing buyer power
- Vertical integration
Wholesale Broadband Access

- Market Definition
- SMP Assessment
- Remedies Imposed
Remedies Imposed 1(9)

- Access to and use of specific resources networks
- Non-discrimination
- Transparency
- Price control and cost accounting
- Accounting separation
Access to and use of specific resources networks

- HT is obliged to provide on reasonable request access to:
  - *bitstream service* regardless of the access technology to the end user used (copper / copper + fiber / fiber)
  - IP level
  - Ethernet level
  - DSLAM/OLT or corresponding level

- HT is obliged not to withdraw access to facilities already granted

- HT was obliged to provide by 1st of January, 2010, technical conditions for provision of private virtual channels
Access to and use of specific resources networks

-HT is obliged to ensure backhaul capacity (Ethernet, or TDM leased lines)
  - HT is obliged to ensure that operators can access HT’s network with own backhaul capacity

-HT is obliged to ensure migration:
  - between Bitstream access levels
  - between Bitstream access and LLU/SLU access
Access to and use of specific resources networks

- HT is obliged to update its WBA offer 6 months before it launches new retail services based on fibre
  - this refers only to WBA at IP level based on FttX

- WBA at Ethernet level or Optical Line Terminal (OLT) based on FttX - only on reasonable request

in accordance with non-discrimination principles
Access to and use of specific resources networks

- HT is obliged to ensure **basic SLA**

- HT is obliged to inform HAKOM on every **advanced SLA** agreed –to monitor in order to enable HAKOM the appliance of non-discrimination
Non-discrimination

- HT is obliged to apply *equivalent conditions in equivalent circumstances* to other undertakings providing equivalent services.

- HT is obliged to *provide services and information* to others under the *same conditions and of the same quality* as it provides for its own services, or those from its subsidiaries and partners.

- HT should provide information on planned modifications in network at least *1 year in advance*.

- HT should provide information on planned de-commissioning of complete copper access network at least *5 years in advance*.

Sarajevo, 5th of November, 2010
Remedies Imposed 7(9)

Transparency – obligation of publishing WBA reference offer

WBA products based on copper

- BSA at IP level by 1st of October, 2009
- BSA at Ethernet & DSLAM level within 90 days from the reasonable request*

WBA products based on fibre

- as HT announced its FTTH/B roll out plan – 50 000 users by the end of 2009 –
- HT is obliged to update its WBA offer 6 months before it offers new retail services based on fibre

Sarajevo, 5th of November, 2010
**Remedies Imposed 8(9)**

### Price control and cost accounting

- **WBA products based on copper**
  - 1\textsuperscript{st} of October, 2009 - HT was obliged to define retail minus index for BSA at IP level for each combination of speed and usage limit offered at retail level.

- **WBA products based on fibre**
  - Cost-oriented price that implies reasonable return on capital employed.
  - Return on capital higher, if new civil engineering infrastructure is to be built.

- HT has been obliged to define prices for private virtual channel for VOIP and private virtual channel for IPTV.
HAKOM Council on 18th of November, 2008, ordered HT the way of performing the accounting separation and cost accounting, in a way and terms defined in the document “Accounting separation and cost accounting instructions” under segment 7 – Wholesale broadband access
Experience After Market Analysis Decisions 1(5)

MARKET 4

- public call for proposals for amendments for the LLU reference offer from 2\(^{nd}\) of June - 2\(^{nd}\) of July 2010
- public consultation on amendments of LLU reference offer - pending
- new LLU offer will be in force until the end of 2010

MARKET 5

- 4 expert supervisions: on 29\(^{th}\) of December, 2009, on 22\(^{th}\) of January, 2009, on 15\(^{th}\) of May, 2009, on 14\(^{th}\) of July, 2009
- public call for proposals for amendments for the WBA reference offer from 12\(^{th}\) – 24\(^{th}\) of March, 2010
- public consultation on amendments of WBA reference offer from 20\(^{th}\) of May to 21\(^{st}\) of June, 2010
- new bitstream offer in force from October, 2010

Sarajevo, 5\(^{th}\) of November, 2010
Wholesale Broadband Access

**WBA PRODUCTS BASED ON COPPER**

- by 1st of October, 2009 - HT was obliged to define retail minus index for BSA at IP level for each combination of speed and usage limit offered at retail level
- HT defined percentage X as 15%
- in HAKOM’s opinion – proposed percentage is not sufficient to prevent exercising significant market power

- HAKOM Council decision of 12th of March, 2010 – percentage X defined as 40%

**WBA PRODUCTS BASED ON FIBRE**

- there is ongoing debate with the incumbent on implementing terms and prices of Bit Stream Access (BSA) at IP level in WBA reference offer
Price control and cost accounting

- HT was obliged to define prices for **private virtual channel for VOIP** and **private virtual channel for IPTV**

- In HAKOM’s opinion – proposed prices were not sufficient to prevent exercising significant market power

- HAKOM Council decision of 15th of September, 2010 – prices for private virtual channels defined

<table>
<thead>
<tr>
<th>private virtual channel</th>
<th>monthly rental in €</th>
</tr>
</thead>
<tbody>
<tr>
<td>virtual channel for VOIP – 256 kbit/s</td>
<td>1,53</td>
</tr>
<tr>
<td>virtual channel for VOIP – 512 kbit/s</td>
<td>2,15</td>
</tr>
<tr>
<td>virtual channel for IPTV SD</td>
<td>2,79</td>
</tr>
<tr>
<td>standalone virtual channel for IPTV SD</td>
<td>4,38</td>
</tr>
<tr>
<td>virtual channel for IPTV HD</td>
<td>6,69</td>
</tr>
<tr>
<td>standalone virtual channel for IPTV HD</td>
<td>8,15</td>
</tr>
</tbody>
</table>

*1€=7,1748 HRK – average exchange rate in period July – December, 2008*
September, 2010 – HAKOM adopted the *Ordinance on technical and application conditions for optical distribution networks*

- conditions for developing, planning, designing, construction, utilisation and maintenance of optical distribution network in Croatia
- quality standards applying to operators and local/regional government for building optical distribution network in Croatia
- creates conditions for *open access network*
Experience After Market Analysis Decisions 5(5)

August, 2010 – BNetzA notified its draft decision on analysis of Market 5

- VDSL and fibre access networks included in the market definition
- DT announced in March, 2010 a plan to reach 10% of German household with FTTH/B by the end of 2012
- European Commission accepted the notification, but asked BNetzA to oblige DT to update its WBA offer before it launches a new retail service based on fibre

September, 2010 – NGA Recommendation

Art 33. - NRAs should apply non-discrimination principles in order to avoid any timing advantage for the retail arm of the SMP operator. The latter should be obliged to update its wholesale bitstream offer before it launches new retail services based on fibre to allow competing operators enjoying access a reasonable period to react to the launch of such products. Six months is considered a reasonable period to make the necessary adjustments, unless other effective safeguards exist which guarantee nondiscrimination.

BNetzA decision in line with HAKOM decision on analysis of Market 5 in 2009
Conclusion

- Remedies to SMP have been imposed as the result of market analysis for the markets 4 and 5.

- Decisions of other bodies and NRAs in Europe has confirmed that Croatia has chosen the right way to regulate these fast growing markets.

- Positive reaction from stock exchange in Croatia and waste majority of the players at the electronic communications market in Croatia.
Thank you for your attention!

Dražen Lučić, Ph.D.
Executive Director