“Restricted mobility or restricted competition? Fixed–mobile convergence and universal access in Brazil”

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Fixed and mobile phone services in Brazil

2002 2003 2004 2005 2006 2007 2008

SMP
STFC

34.9 42 46.3 65.6 86.2 99.9 120.9 150.6

0 20 40 60 80 100 120 140 160 180
Embratel Livre distribution (September, 2008)

- Users in cities > 150,000 inhabitants
- Users in cities between 100,000 and 150,000 inhabitants
- Users in cities < 100,000 inhabitants
- Users of Embratel Livre wired
<table>
<thead>
<tr>
<th></th>
<th><strong>Vésper Portátil / Embratel Livre</strong></th>
<th><strong>Local Telecomunicações</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business model</strong></td>
<td>Served areas, subscriptionless service, market niche</td>
<td>Handset economies of scale, low-cost deployment, affordable plans</td>
</tr>
<tr>
<td><strong>Spectrum</strong></td>
<td>1975–1990 MHz (RBS to terminal) 1895–1910 MHz (Terminal to RBS)</td>
<td>1835–1838 MHz (RBS to terminal) 1740 MHz (Terminal to RBS)</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>CDMA</td>
<td>GSM</td>
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<td><strong>License</strong></td>
<td>Service license: STFC WLL radiofrequency licenses</td>
<td>Service license: STFC Secondary radiofrequency licenses</td>
</tr>
<tr>
<td><strong>Area</strong></td>
<td>All codes of regions 1, 2 and 3</td>
<td>Codes 85 to 88 (Region 1)</td>
</tr>
<tr>
<td><strong>Subscribers</strong></td>
<td>1.8 million (Dec, 2008)</td>
<td>2,600 (Dec, 2007)</td>
</tr>
</tbody>
</table>
Local Telecomunicações and the microtelco model

- Small-scale telecom operator
- Local entrepreneurship
- Innovative business model
- Low-cost technologies
- Area or little interest to traditional operators
Conclusions (1)

So far, the conjunction of an enabling regulatory environment with innovative business models, wireless technologies applied to STFC networks, along with user satisfaction with mobility restrictions, resulted in crescent deployment of FWA and GSM systems as fixed telephone services in Brazil.
Conclusions (2)

- This trend is under peril due to the lack of a new regulatory approach designed to:
  - preserve the fragile situation of a fixed phone company using cellular frequencies on a secondary basis;
  - assure operators the ability to apply restricted mobility in their fixed phone networks.
Conclusions (3)

- The cases described show that different strategies were applied for different purposes and conditions.
  - On high-density areas, in which *Vésper Portátil* and *Embratel Livre* provide STFC, FWA/WLL application has proved to be an important tool to reverse STFC deployment stagnation. In this case, FWA/WLL functions as a successful business model oriented towards low-income, senior population satisfied with subscriptionless low-cost telephony services restricted to neighborhood mobility. Previously referred limits on mobility experienced in the *Embratel’s* case show that a service unified license would facilitate the implementation of such approach.
  - *Local* case, in turn, proved to be an important initiative to increase universal access in low-income areas providing low-price services through two simple service plans as a small-scale operator present in the local community life.