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Exploiting the Caribbean's mobile roaming's potential

The telecoms market liberalization process for most Eastern Caribbean countries has been characterized by overly optimistic calculations from inexperienced regulatory entities. For example, each of the ECTEL countries has decided to issue two to three mobile licenses for new entrants to compete against incumbent Cable & Wireless. Undoubtedly, regional governments were betting on the large number of tourists to justify the large number of licenses as operators would be able to capitalize on roaming revenues derived from visitors. Thus, even though no island on the OECS has more than 175,000 inhabitants, most of them currently have three mobile operators offering service – see exhibit I.

Exhibit I: Mobile Operators on OECS & ECTEL Countries as of 1Q05

OECS State	Population (July '04)	ECTEL Member	Mobile Operators
Anguilla	13,008	No	1
Antigua & Barbuda	68,320	No	3
British Virgin Islands	22,187	No	1
Dominica	69,278	Yes	3
Grenada	89,357	Yes	3
Montserrat	9,245	No	1
St. Kitts & Nevis	38,836	Yes	3
St. Lucia	164,213	Yes	3
St. Vincent	117,193	Yes	3

Source: Signals Telecom Consulting, ECTEL, OECS

Market saturation is now a reality in the Caribbean. Mobile operators are challenged to create new revenue sources, retain profitable clients, and outperform their direct competitors. This has led operators such as Digicel Group to start considering the launch of fixed-wireless services. It has also forced incumbent Cable & Wireless to better assess the type of synergies that it could obtain from its mobile and fixed operations, without falling into what could be considered an illegal cross subsidy.

Even though mobile roaming was cited as the main reason for the award of two to three licenses on the Eastern Caribbean islands, this business has yet to be fully exploited by mobile operators. This is due to two main factors: spectrum allocations and the technology infrastructure chosen by the operator. In an island such as St. Lucia, where Cable & Wireless operates a GSM network on 850 MHz, the operator never sees around 68% of all potential roaming customers or 82% of all GSM-based roaming revenue because those tourists come from Europe and can't roam on 850MHz – see exhibit II.

C&W's main rivals Digicel and Cingular Wireless are using frequencies compatible with European networks, and thus the US\$11.2 million dollars in roaming revenue from these travelers will be divided by these two operators. Furthermore, if potential CDMA roaming revenues (under the assumption that all problems are solved and operators are able to close roaming agreements with US and Canadian CDMA mobile operators) are considered, another US\$2.7 million are lost as currently no mobile operator provides CDMA roaming in the Eastern Caribbean.

Exhibit II: Share of GSM Roaming Unaddressed by Selected C&W GSM 850 MHz Networks

C&W Operation	2004	2005	2006	2007	2008	2009	2010
Anguilla	57%	53%	49%	48%	48%	49%	50%
Antigua & Barbuda	89%	86%	85%	84%	84%	84%	85%
Barbados	87%	85%	83%	82%	81%	81%	81%
Cayman Islands	25%	21%	19%	19%	19%	19%	20%
Grenada	82%	79%	77%	76%	76%	77%	77%
St. Kitts & Nevis	47%	42%	39%	37%	37%	38%	38%
St. Lucia	82%	79%	76%	75%	75%	76%	76%
St. Vincent	83%	80%	78%	77%	76%	77%	77%
Trinidad & Tobago	64%	59%	55%	53%	52%	53%	53%
Turks & Caicos	32%	28%	26%	24%	25%	25%	26%
Revenues US\$ millions	US\$80.3	US\$80.4	US\$79.8	US\$78.5	US\$76.3	US\$74.2	US\$72.5

Source: Signals Telecom Consulting

It's a visitors' market!

The unsustainable mobile growth taking place in the Caribbean is characterized by subscribers having more than one cell phone service – typically prepaid – to be able to benefit from the lower rates offered by on-net calling plans. This development depreciates the real value of any new subscriber and extends the time needed by operators to recoup their subscriber acquisition and maintenance costs. Under this scenario roaming's importance increases and mobile operators are forced to readdress their current strategies and adopt a parallel approach of deploying focalized networks targeted solely at incoming visitors and not the local market.

Thus, for a country such as Bahamas that receives 5 million visitors each year, with about 91% coming from the US and Canada, the short term provides the incumbent monopoly with two clear options. One is to implement a focalized UMTS/HSDPA network in 1900 MHz to target Cingular Wireless' high-end and business travelers and do a similar deployment for cdma2000 that includes 1xEV-DO. Roaming revenues from CDMA users could be US\$31.4 million in 2005 if an operator in the Bahamas offered the technology.

Signals believes that unless new mobile networks are deployed in the Bahamas – see exhibit III, the country would not be able to capture more than 50% of the roaming revenues during the 2005 – 2010 time period.

Exhibit III: Bahamas Potential Roaming Revenues (US\$ millions)

Potential Roaming Revenues	2005	2006	2007	2008	2009	2010
European GSM Revenues % of Total Revenues	US\$9.3 12%	US\$9.2 11%	US\$9.1 10%	US\$8.8 10%	US\$8.6 10%	US\$8.4 10%
CDMA Revenues % of Total Revenues	US\$31.4 40%	US\$33.5 40%	US\$35.1 40%	US\$35.4 41%	US\$37.8 44%	US\$37.8 45%
Total Lost Revenues % Lost Revenues	US\$40.7 53%	US\$42.8 51%	US\$44.2 51%	US\$44.3 52%	US\$46.5 55%	US\$46.2 56%
Total Potential Revenues	US\$77.6	US\$84.3	US\$87.4	US\$85.7	US\$85.1	US\$83.1

Source: Signals Telecom Consulting

Proliferation of 3G

The Bahamas case serves to illustrate a phenomenon that is developing in the Caribbean: the need to deploy networks just to fulfill the requirements of roaming visitors. In other words, the arrival of UMTS/HSDPA into the Caribbean and the proliferation of cdma2000 and specifically EV-DO networks will be directly related to the percentage of visitors arriving from Europe or the US that use those technologies. For example, places like Aruba, Bahamas, the British Virgin Islands and the Cayman Islands should see the deployment of cdma2000 and UMTS/HSDPA on 850/1900MHz in the near future, as the vast majority of their visitors arrive from the US.

On the other hand, mobile operators in Antigua & Barbuda, Barbados or the French Antilles should be considering deploying UMTS/HSDPA on 2.1GHz since the largest share of their visitors arrive from Europe. Caribbean mobile operators interested in continuing to benefit from European-generated roaming revenues need to consider that in a few years the European-based GSM subscribers will decrease as the migration to UMTS accelerates.

Too many vendors

Contracts for the deployment of UMTS/HSDPA or cdma2000 infrastructure in any of these countries would most likely be smaller than those granted for 2G networks, since the number of required base stations and cell sites would be smaller. Nevertheless, this new opportunity for vendors could result in some reshuffling of vendor contracts. Caribbean mobile infrastructure deployments are currently

dominated by Nortel Networks. But the region's main competing infrastructure vendors, such as Lucent Technologies or Ericsson, could leverage the number of UMTS/HSDPA and EV-DO contracts that they have gained in the United States and Europe to showcase to Caribbean operators their expertise in these areas. However, these three operators will also have to face price competition from Chinese manufacturers such as Huawei and ZTE, which are aggressively seeking to expand their presence in the region.

Future Outlook

Caribbean mobile operators interested in increasing their roaming revenues will start considering focalized network deployments that will allow them to provide roaming services to US & European visitors that utilize different technologies in their home markets. For example, Cable & Wireless is an example of a mobile operator deploying a GSM 1900MHz network in several of its properties just to target European roamers.

UMTS/HSDPA and EV-DO 3G technologies will be deployed in the Caribbean region faster than in Latin America. The deployment schedule will depend on their adoption in the countries that provide the larger share of visitors to the islands, as well as their willingness to use their mobile phones. Based on this, Aruba, Bahamas, Cayman Islands, French Antilles, Netherlands Antilles and the British Virgin Islands are the most likely market to offer commercial UMTS and EV-DO services before mid-2006.

Finally, increased competition on network deployments will undoubtedly benefit the mobile operators, as they currently hold the cards in what has become a war of attrition among the various infrastructure vendors.

About the author

Jose F. Otero is President and founder of the international consultancy Signals Telecom Consulting. He has collaborated in projects for institutions such as the World Bank, the Inter-American Telecommunications Commission (CITEL), the White House and the US Department of Commerce. Mr. Otero has done projects for various consultancies including Informa Telecoms & Media, Gartner Group, The Strategis Consulting Group, and Mexico-based CIDE. Mr. Otero is frequently invited to speak at industry events receiving invitations to present at congresses organized by Colombia's



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