JUAN BARRETO/AFP/Getty Images

SERVING THE DIGITAL REVOLUTION

Assessing the transformation of the subsea cable landscape in the Middle East.

By Ivan Skenderoski and Alisha L. Lehr

The subsea landscape of the Middle East region is experiencing a number of changes, from new cable systems increasing the availability of international capacity, to the growing capacity pressures resulting from the continued deployment of Next Generation Networks (NGN), offering a portfolio of capacity hungry services to end-users.

The total demand for international capacity from the Gulf countries has shown significant year on year growth. This has been fuelled by the deployment of fibre broadband and ADSL, continued penetration of mobile broadband, and the emergence of regional content providers.

As with any rapidly changing industry it will be critical for telecom wholesalers and service providers alike to be prepared for fluctuating business drivers affecting both the revenue and the cost front. However, the key participants in the subsea landscape future will be the regional regulators who will need to foster and shape a fair and sustainable telecom landscape by promoting open access principles in the telecom regulatory framework.

Up until the announcement of the construction of the Gulf Bridge International (GBI) Cable in 2008, the Gulf region was relatively dependent on a limited number of systems for international connectivity, such as the Falcon and FOG cable systems. In recent years, the region has seen an influx in the construction and announcement of new subsea cables systems and competing terrestrial systems.

These latest systems include the Tata TGN Gulf Cable System, the JADI fibre optic network system, the Regional Cable Network (RCN) connecting similar countries as the JADI cable, and the Europe Indian

"We are predicting that circuit price erosion in the region will continue in the future as the competition intensifies with average annual prices declining in the region of 15-20%."

Gateway (EIG) primed to launch at the end of 2011 and of which BT is a partner.

The two terrestrial cables (JADI and RCN) provide connectivity to Europe through Istanbul, Turkey and serve as an alternative route to link the Arabian Peninsula to Europe avoiding the geographical bottleneck for subsea cables in Egypt. This is particularly important considering the issues cable operators face in securing crossings through Egypt. These cables have also seen active participation from major telcos en route, such as Saudi players Saudi Telecom and Mobily, and UAE's Etisalat taking stakes in the new cables.

The wholesale capacity market will become increasingly competitive as the new regional systems light their networks, with the system ready-for-service dates for these cable systems not far off from one another.

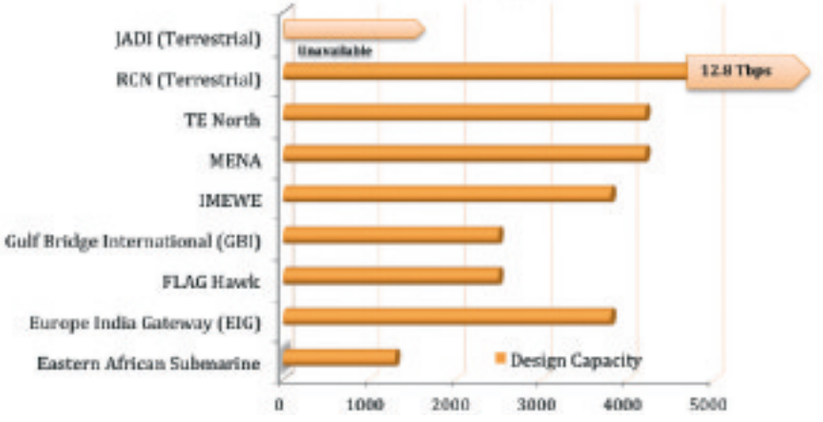
The capacity flooded markets of the 1990s dotcom crash are a poignant reminder of what can happen when there is a surge in capacity – the entire market can be drastically affected as competition heats up on quality, diversity, and pricing.

We have already observed strong price erosion on the international capacity circuits connecting the Middle East, Europe, and Intra Gulf countries. An upgrade to SeaMeWe-4 in 2008 nearly tripled available capacity between Europe and Egypt, offering consortium members additional capacity at a very low incremental cost and dramatically reducing the prices. We are predicting that circuit price erosion in the region will continue in the future as the competition intensifies with average annual prices declining in the region of 15% to 20%.

It is worth noting that even though wet (subsea) circuit prices continue to fall, this has not been reflected beyond the landing point with local operators still holding high prices for the backhaul – therefore city to city prices for circuits between Europe and the Middle East are still very high compared to other regions across the globe. In future this will pose an issue for consumer and business broadband pricing and it is an area where regulators could intervene to support access for second tier operators and ISPs.

The 'Open Access' approach to landing stations and regulated backhaul pricing has already provided benefits to the end users in countries where regulatory intervention was implemented such as the UK and India.

ESTIMATED DESIGN CAPACITY OF REGIONAL MIDDLE EAST CABLE AND TERRESTIAL SYSTEMS (GBPS)



Source: BT Telconsult analysis.

DOWNSTREAM BENEFITS

The international capacity price reductions are expected to have an observable downstream effect on the telecom services pricing for both consumers and businesses. The average consumer bandwidth price in the Middle East region is on average higher than the pricing levels in Europe and Asia.

Some regions have seen a significant reduction in end user pricing as a result of the increased available international capacity.

According to The Economist, Africa has seen a 90% drop in end-user consumer data prices as result of the increased availability of capacity from the arrival of new subsea systems in 2010.

While it is unlikely that the Middle East will experience the same level of price reductions as in Africa, mostly due to Africa's reliance on satellite connectivity, the Middle East should experience consumer service pricing level drops on par with current pricing levels seen in more mature markets.

"Due to the liberalisation policies and lack of reliable fixed infrastructure in the Middle East, the mobile sector has developed with unprecedented pace over the last few years."

DEMAND DRIVERS

The main drivers behind this surge of international capacity from the Middle East are:

1.Increase of broadband penetration and availability of higher speed packages. Even though fixed broadband subscriber growth hasn't been as strong as mobile broadband it has nevertheless progressed with a steady pace of net additions every quarter. The outcome has been a doubling of subscribers from just over 2 million in 2008 to over 4 million in 2010. Analysts predict a doubling again in the next four years reaching over 8 million by 2014.

These forecasts are in-line with our expectations as the household penetration in the Middle East is currently at 10.2%, far below the OECD average of 57.8%.

As average broadband package speeds increase, because VDSL or FTTH replaces ADSL; and as applications (e.g. content streaming, IPTV, file sharing) become more bandwidth 'hungry'; greater pressure is placed on core IP and international network connectivity. Experience from installed FTTH environments typically shows that users consume 3.5 times more bandwidth as the equivalent ADSL users.

2. Due to liberalisation policies and lack of reliable fixed infrastructure in the Middle East, the mobile sector has developed with unprecedented pace over the past few years. With mobile penetration greater than 100%, saturated market operators are turning their focus on mobile broadband as the next growth area.

The lack of fixed infrastructure has been exploited by mobile players pushing for substitution of fixed broadband with a wireless solution (wireless modem or 3G dongle). The cumulative effect is an expected explosion in mobile data in the next five years. Cisco estimates the Middle East and Africa to have the biggest growth among all regions with CAGR of 129% over the next five years.

3.Increase in digital content consumption and emergence of local content. The Middle East region has also recently seen increased consumption of content and content related services – these range from over the-top-content provided by web sites such as YouTube and other social networking sites to premium content provided by means of digital satellite or telecom IPTV platforms.

The IPTV trend is supported by the deployment of NGN and FTTH networks and by increased investments in regional content houses and joint ventures such as the STC and Astro Malaysia under the name of Intigral. In order for the content to "flow" across with the right quality of service operators are also implementing Content Delivery Network (CDNs) that contribute to the demand of international bandwidth as often these CDN platforms are intended for regional or even wider content distribution.

We are also seeing the trend for increased creation and consumption of Arab local content that should steadily rebalance the split between regional content and western sourced content. This helps increase demand for regional data links as opposed to over dependency on data links to international content hubs in Europe and the US.

As the Gulf countries diversify their economies they are likely to attract sporting and cultural events that further boost the demand for international data links. An example of this is the planned FIFA Qatar event in 2022 that is estimated to attract a large number of visitors (estimated at half a million according to the advisory firm Morrison Menon) and will also create a spike in the bandwidth demand for international circuits to Qatar as international media and news companies will be looking to broadcast high definition live content and other information from the event.

With the significant changes anticipated to hit the Middle East international capacity market from both a supply and demand front, it is essential that regulators take an active approach in managing the transforming landscape. A key focus area for the Telecom Regulatory Authorities (TRAs) should be ensuring Open Access, which is based on principles for equal, fair and non-discriminatory sharing of communication resources. This applies to the international capacity market in the form of opening up of the access to international capacity gateways, ensuring service providers are not participating in discriminatory pricing activities or other non-competitive practices.

By ignoring or postponing the implementation of the Open Access principles in the regulatory framework, TRAs may face such telecom market consequences as reduced competition, deterred new entrants, maintained artificially high prices for backhaul connectivity to cables (including interconnection fees), stifled innovation, and ultimately disadvantaged end-users.

Ivan Skenderoski is principal consultant, and Alisha L. Lehr is senior consultant at BT Group.