



# **The Politics of Interconnectivity in the Arab Gulf States**

**Nada Alwadi**

**PhD Student / Virginia Tech**



**SCHOOL OF PUBLIC AND  
INTERNATIONAL AFFAIRS**  
VIRGINIA TECH™

# Introduction



- The issue of developing a healthy local internet ecosystem in the Arab Gulf states is one that has captured the interest of all stakeholders of internet governance. One of the challenges to achieve this goal is the nature of interconnectivity within the region. It is an issue that has not yet been examined from a political lens.
- Evidence shows that the approach to interconnection throughout the Gulf region remains national, rather than regional, in scope. Recent reports on interconnectivity in the Gulf region indicate that while some Gulf countries lead the world in indicators such as mobile penetration and internet speed, the region's peering landscape lags far behind. Based on the available data, most internet traffic in this region travels outside the region to be exchanged in Europe before being sent back to the region.



- Rather than making use of the internet exchange points (IXPs) that have been established within the region, most of the exchange is happening outside the region. This continues despite the well-documented benefits to the entire internet ecosystem when traffic is exchanged across local or regional IXPs.
- As a result, the cost for internet connection in the Gulf region is among the highest in the world. Transit cost for exchanged data packets can be significant. According to the internet society, the cost per Mbit/s per month in MENA ranges from \$10 to \$67, compared with prices near or below \$2 in the United States and Europe.

## Why is this happening?

- In this brief talk, I will argue that this specific behavior exemplifies the dynamics of a dual strategy of internet governance exercised in the Arab Gulf States. Openness vs Centralization.
- Arab Gulf States are open to build and adopt new technologies designed to better the network and for market gain, yet conservative and centralized when it comes to the exchange of data, especially on a regional level.
- This can be examined by looking at the political economy within the telecommunication market, and the inclination towards a cyber-centric governance of interconnection.

**Political  
Economy of  
the Telecom  
Market**

**Cyber-Centric  
Governance**



# Cyber-Centric Governance

“Cyber-centric governance” is an approach of governance that places a strong emphasis on cybersecurity and digital risk management. It involves structuring and managing an organization’s governance framework in such a way that cybersecurity is a central and integral component and a top priority.



## Indicators of Cyber-centric governance

- Framing the internet and its technical arrangements as a cyber security issues.
- Strong control over each Gulf state's border, with only few access points to the international network through the incumbent ISPs ( usually the national telecom company).
- Domestic connectivity within the countries show bottlenecks and potential single points of failure, while regional connectivity is not optimized in the region, with traffic being sent across distant locations rather than making use of local exchange points.



# Political Economy of Telecom Market in the Gulf

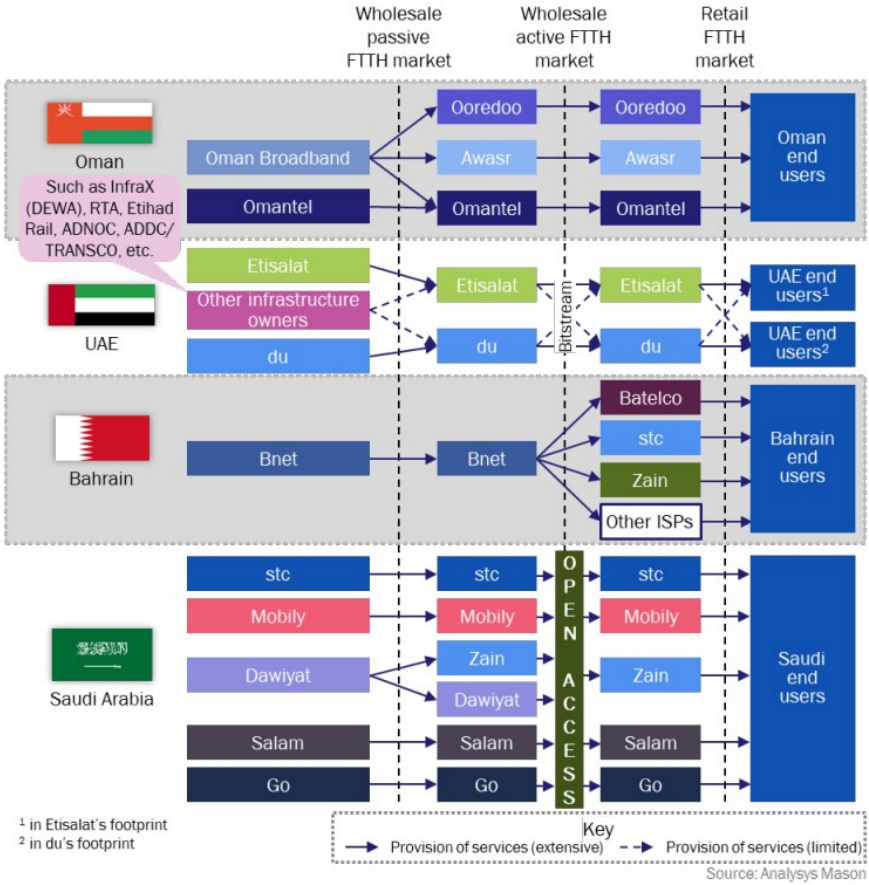
## Market dominance

- The Gulf has stood out as one of the world's fastest growing sources of global demand over the past two decades.
- The telecommunication sector in the Gulf is dominated by a handful of companies or ISPs. Just nine telecoms operate all mobile and internet services across the Gulf: Zain (Kuwait), Ooredoo and Vodafone (Qatar), Etisalat and du (UAE), Saudi Telecom and Mobily (Saudi Arabia), Omatel (Oman), and Batelco (Bahrain), they can be referred to as the incumbents. Hundreds of smaller technology companies are linked to these incumbents as subcontractors, resellers, and service providers. Other smaller ISPs are forced to transit their internet traffic through the incumbent because they don't have the infrastructure needed for interconnectivity.

# Understanding the Gulf telecom market

Source: Analysys mason – August 2022



















Figure 1: Comparison of fixed broadband market structures in selected countries in the GCC





- On the Gulf scale, the entire Gulf market is in effect dominated by just four companies: **Saudi STC, Qatar's Ooredoo, Kuwait's Zain and UAE's Etisalat**. These four companies and their subsidiaries operate 11 of the 15 mobile licenses in the region. **The other 4 companies: Bahrain's Batelco, Oman's Omantel, UAE's du, Saudi's Mobily operate exclusively in their local markets**. Bahrain, Saudi Arabia, Kuwait, and Oman have operators from a second and third Gulf state, while only national companies operate in UAE and Qatar. Apart from a Vodafone joint venture in Qatar, there are no foreign companies from outside the Gulf active in any Gulf state. In fact, the leading Gulf telecom companies have been expanding their services to other Arab and non-Arab countries in the region. Gulf telecom companies control at least one of the main telecom operators in 18 countries across Asia and Africa.



Company	Market value	Owned by	Operates in
STC	\$46.7 B	Saudi Arabia 	Saudi Arabia, Bahrain, Kuwait 
Ooredoo	\$5.2 B	Qatar 	Qatar, Oman, Kuwait 
Zain	\$7.1B	Kuwait 	Kuwait, Bahrain, Saudi 
Etisalat	\$33.2 B	UAE 	UAE 
du	\$6.4 B	UAE 	UAE 
Batelco	\$1.6 B	Bahrain 	Bahrain 
Omantel	\$1.1B	Oman 	Oman 
Vodafone		Qatar 	Qatar, Oman 
Mobily	\$4.5 B	Saudi Arabia 	Saudi Arabia 

# Top Telecom Companies in the Gulf

Source : Author



# How does interconnectivity look like in the Gulf?

## **Domestic Connectivity**

Diverse and somewhat resilient, in some Gulf countries more than others ( like Saudi Arabia and UAE).

Yet , small players are still affected by market dominance of Incumbents.

**Question to small providers:** Is domestic exchange happening? Why, why not?

Figure 9:  
Connectivity between networks in Saudi Arabia



# Domestic Connectivity

- In Saudi Arabia, there is a density of networks that goes far beyond the country's number of service providers. Banks, enterprises, universities, hospitals, and others are all running their own networks, resulting in a more diverse and resilient local internet landscape.
- Source : RIPE 2020

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## **Regional Connectivity :**

Providers in the Gulf region prefer European exchanges or prefer to peer with one another via transit in these locations.

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Yet, Some regional exchange is still happening

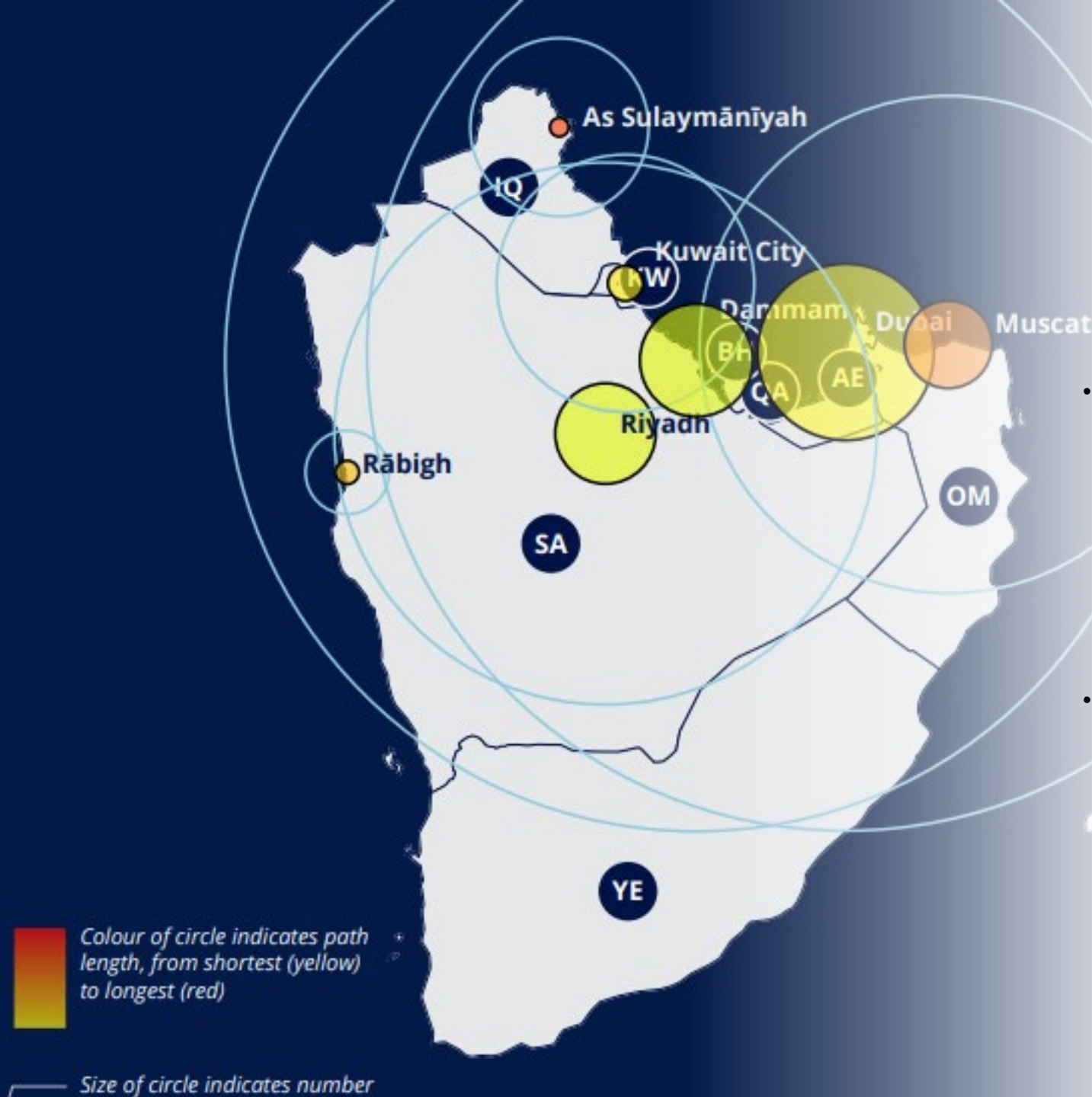
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**Question to Incumbents:** Which points have the potential to be exchange hubs in this region? What stands in their way?



**How does  
interconnectivity  
look like in  
the Gulf?**

# Regional connectivity



- According to the data from the RIPE Atlas measurement network that shows how networks in the region exchange traffic with each other and where this exchange takes place, providers in the Gulf region prefer European exchanges, or prefer to peer with one another via transit in these locations.
- However, some regional exchange is still happening, a large number of paths are centered around Dammam and Dubai, indicating that a high volume of traffic is likely being exchanged there. Riyadh and Muscat seem to act as lesser exchange points..



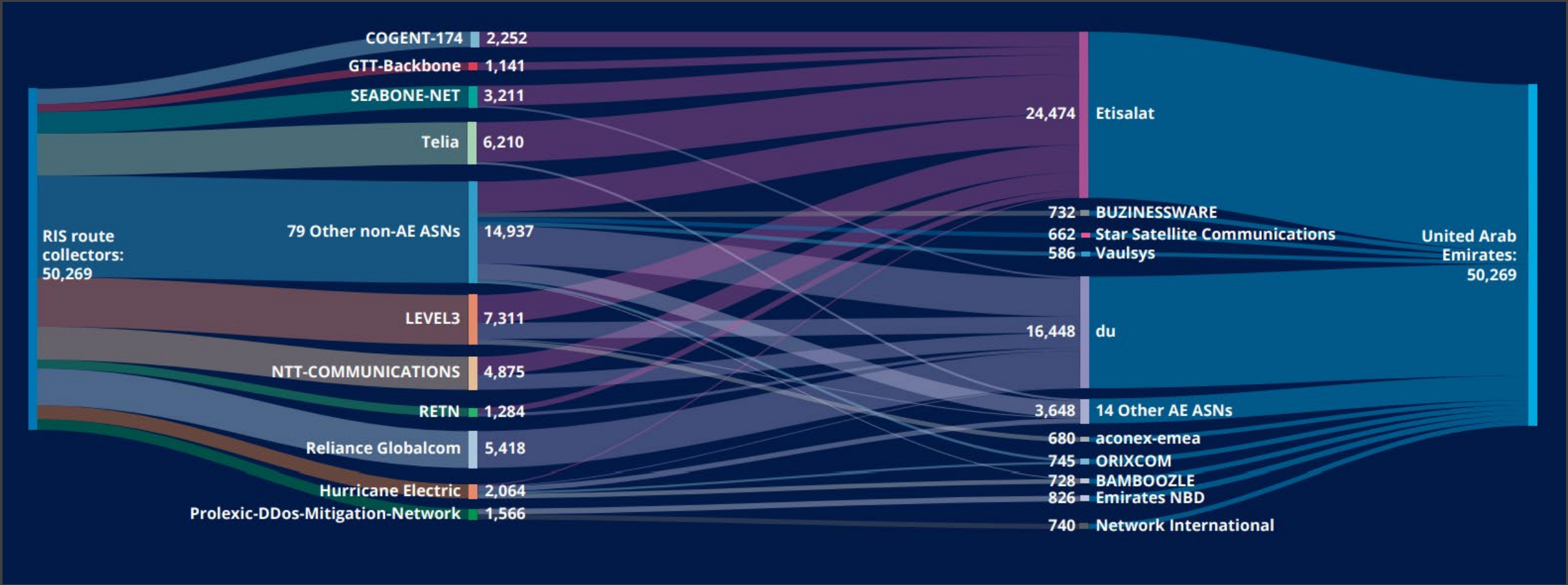
# How does interconnectivity look like in the Gulf?

## International Connectivity

Arab Gulf States are similar in relying on a handful of operators providing international connectivity to their entire countries.

Yet they vary in terms of access to the global network. UAE is an example of a more vibrant connectivity with multiple gateways to the global network.

**Question to Regulators** : why are there more access points to the global network in UAE compared to other Arab Gulf states?



# International connectivity

- Gulf countries vary in terms of their access to the rest of the global Internet. Despite their differences, They are similar in their reliance on a handful of operators providing international connectivity for entire countries. UAE is an example of a more vibrant connectivity with multiple gateways to the global internet.





# Discussion

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