

# Africa Subsea Strategy

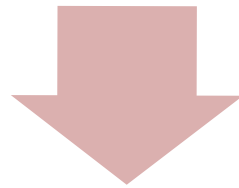
Sunil Tagare

SAFNOG-5

**Dialog Needed Between OTTs And Carriers**

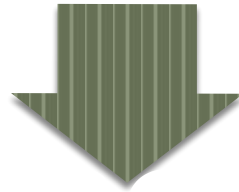
**Because They Are So Different**

OTTs



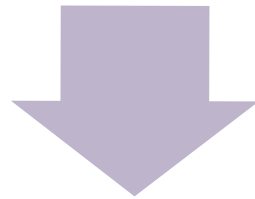
Telecoms  
Is  
Cost  
Center

Carriers



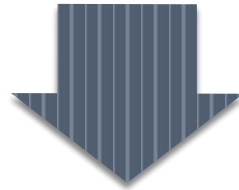
Telecom  
Is  
Profit  
Center

OTT  
Revenues



~~Telecom~~  
Advertising/Cloud/E-C  
ommerce

Carrier  
Revenues



Telecom  
Only

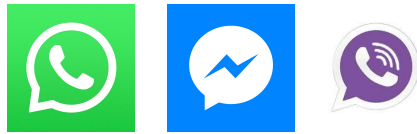
# OTT Telecom Strategy



Share Fiber Costs  
With Carriers  
Offer Free Telecom  
Services

# OTT Free Telecom Services

## Messaging



## Images



## Voice



## Blogs



## Video

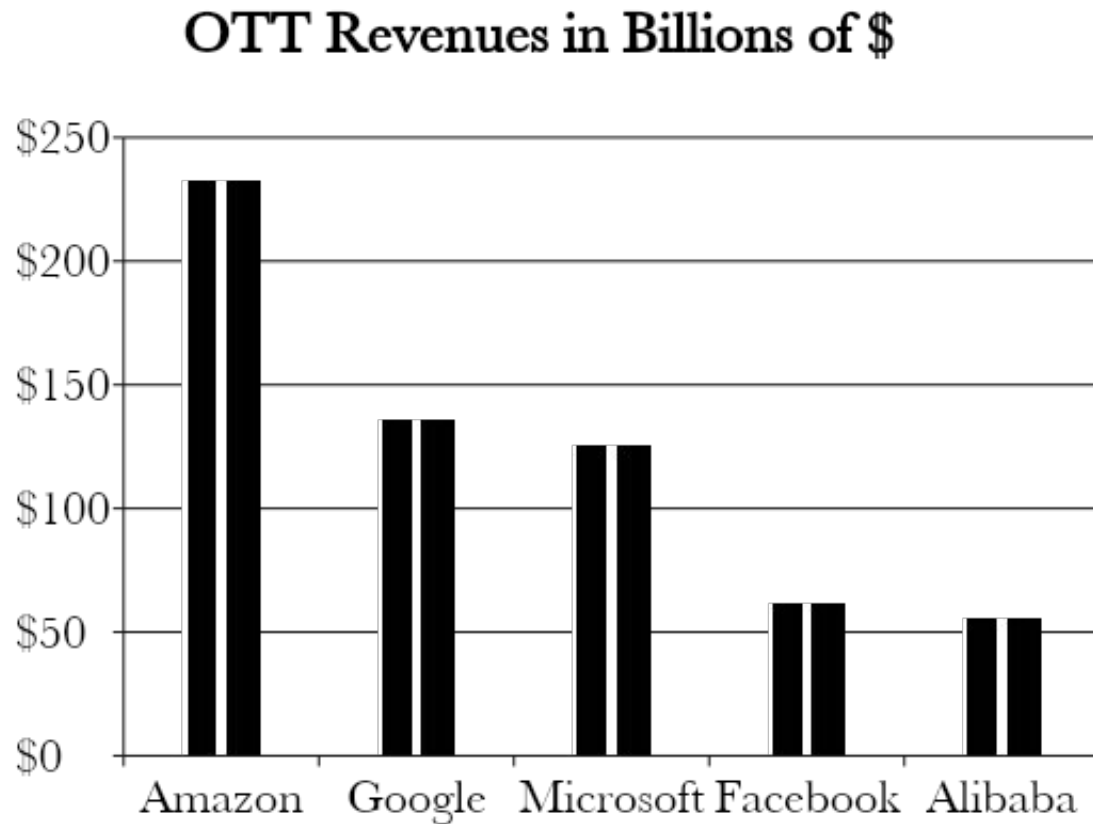


## Conference Calls





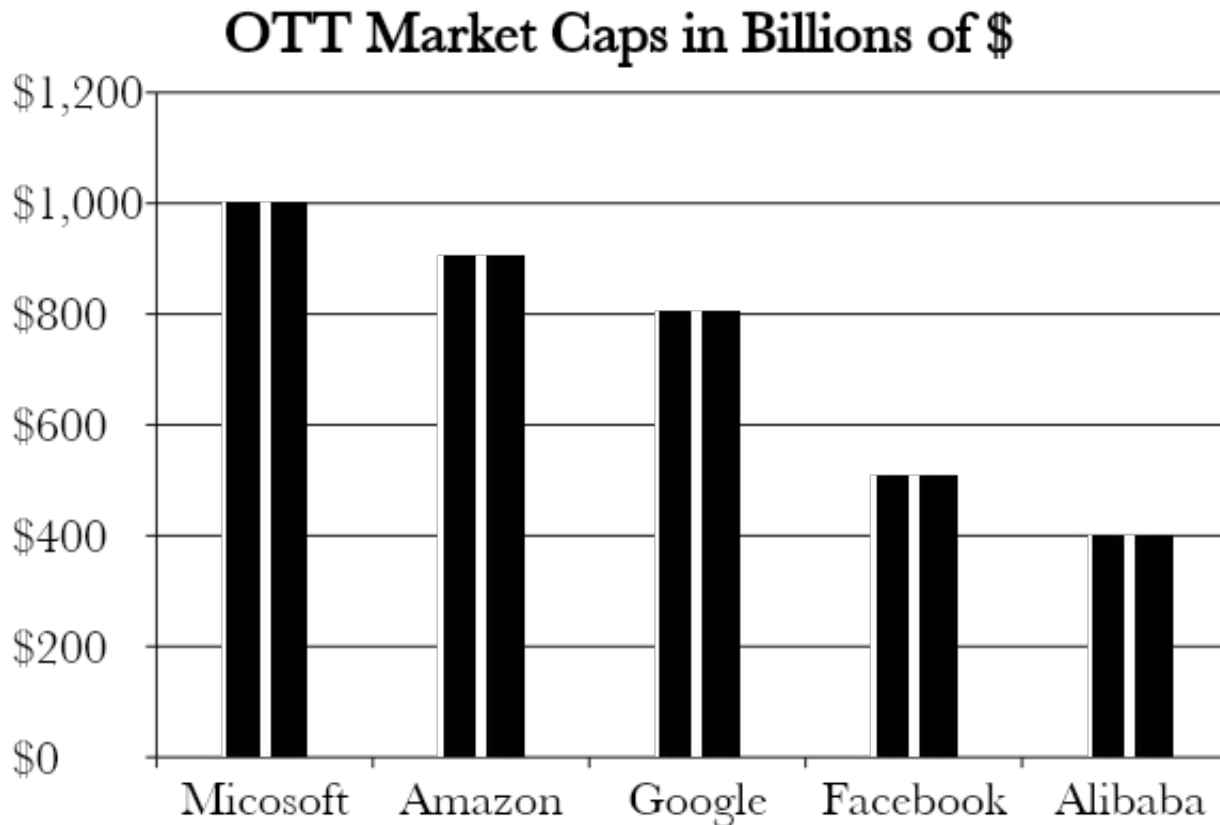
# OTT Revenues



**Total OTT Revenues**

**~\$1 Trillion/yr**

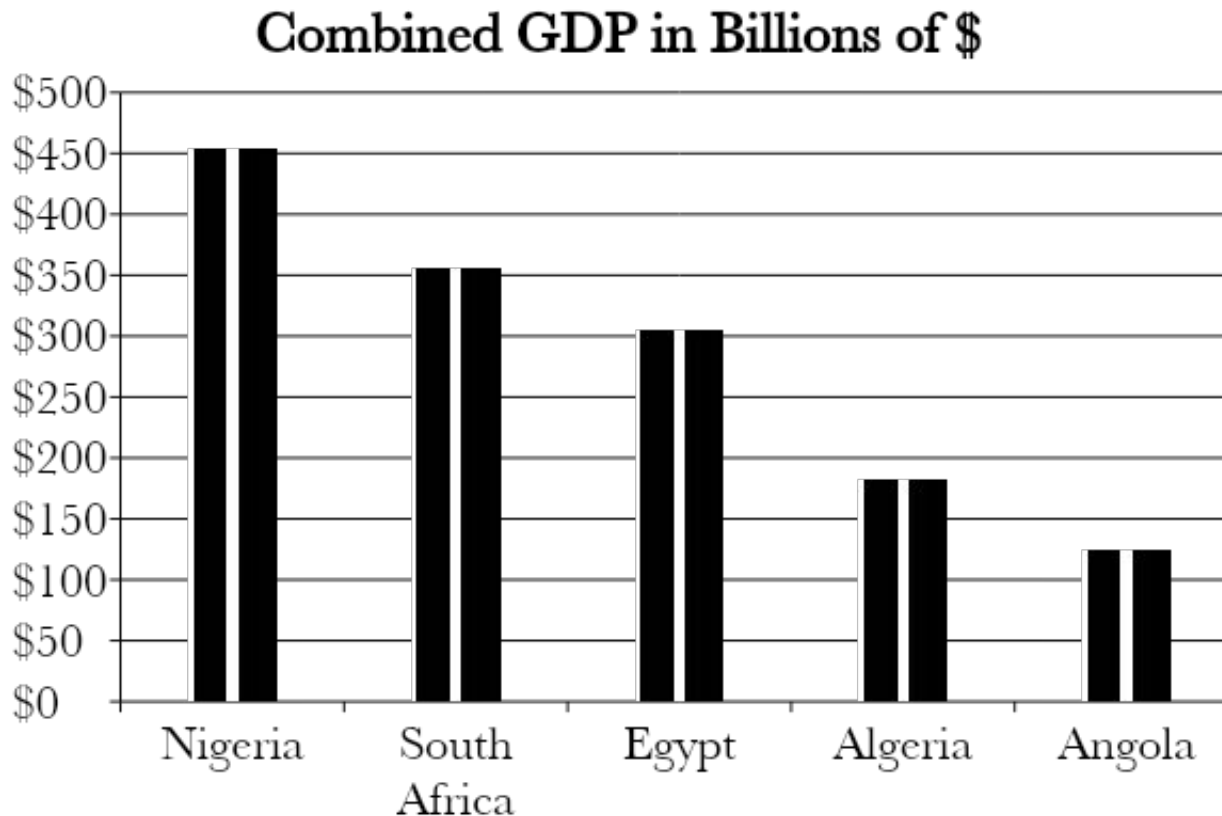
# OTT Market Caps



**Total OTT Market Cap**

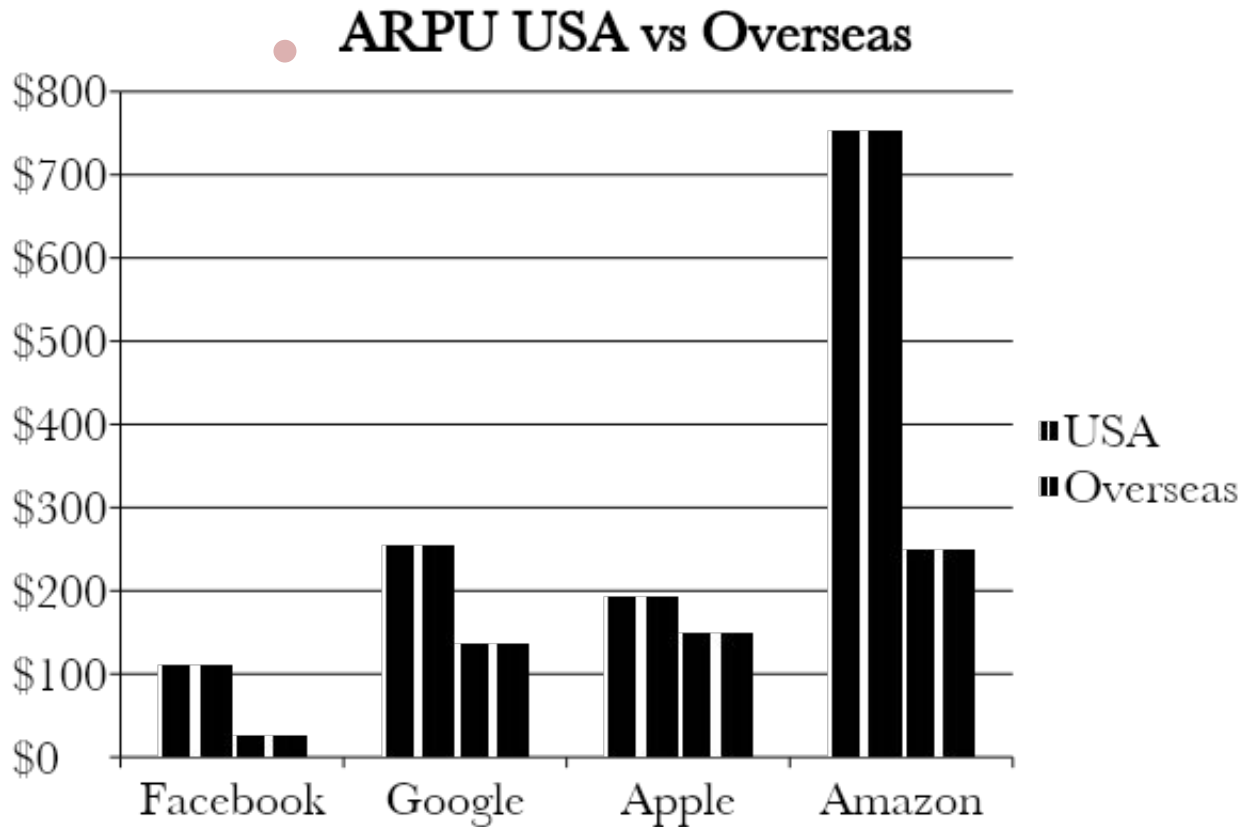
**~\$8-\$10 Trillion**

# African Countries Combined GDP



**Total Africa GDP (54 Countries)     \$2 Trillion**

# Revenue Per User

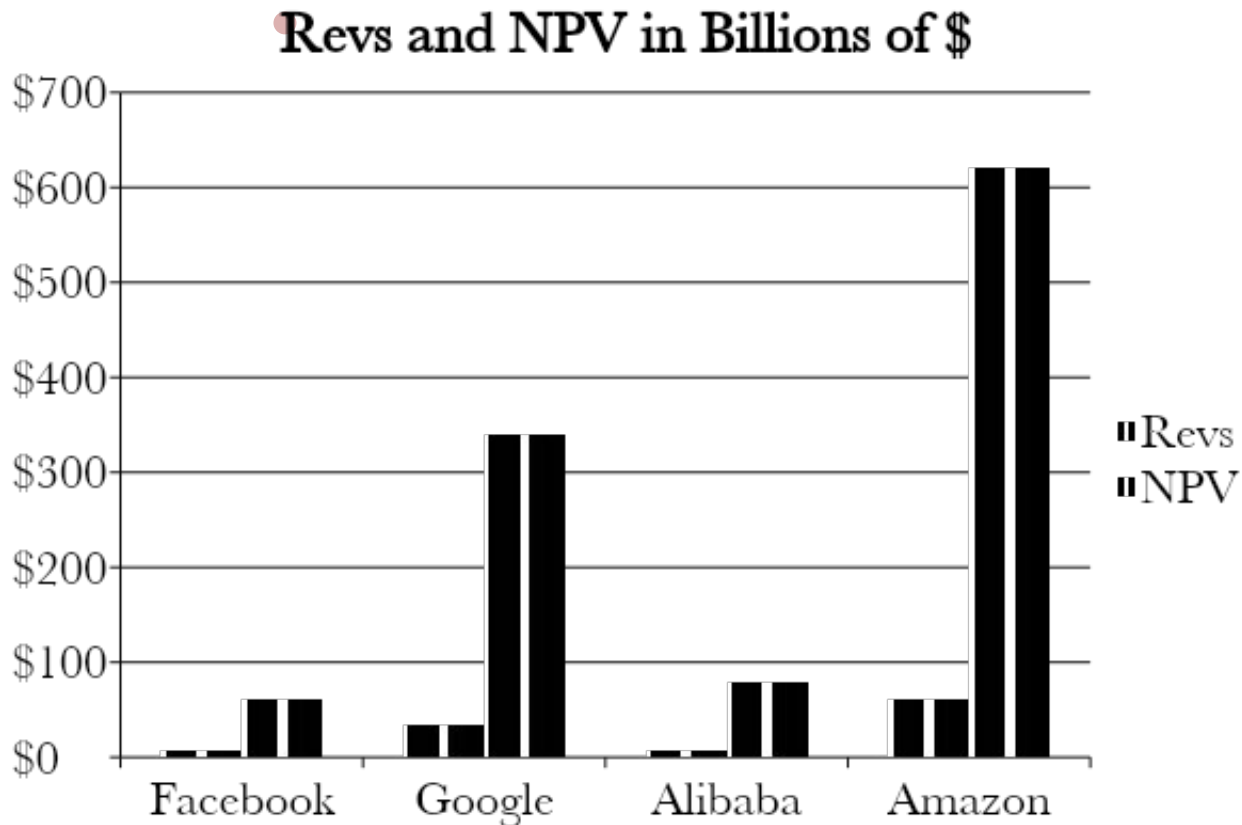


**Total All OTTs \$2,000/yr(USA), \$500/yr(Overseas)**

# Africa Statistics

- Countries: 54
- Population: 1.3 Billion
- Total Internet Users: 550 Million (40% of total)
- Potential Internet Users: 800 Million (60% of total)
- Additional Internet Users Expected: 250 Million

# Addl Revs For 250 Million New Users

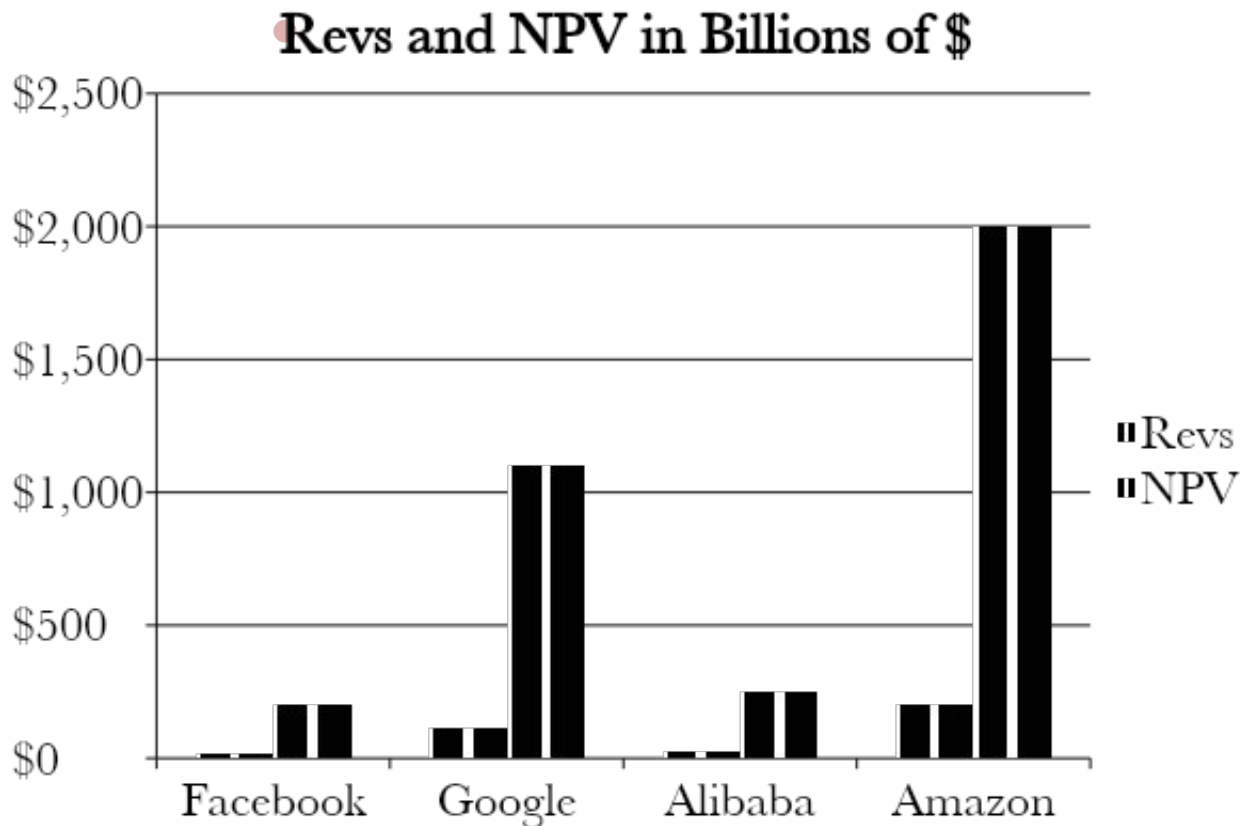


**Total All OTTs \$125 Billion/yr (Revs), \$1 Trillion(NPV)**

# Price/Revs Ratio For Valuation

	Market Cap/ Revenues	Excess Valuation for 250 mm subs
Facebook	8.5	\$50 Billion
Google	5.5	\$190 Billion
Alibaba	10	\$80 Billion
Amazon	3.5	\$220 Billion
<b>Total All OTTs</b>	<b>5.5</b>	<b>\$800 Billion</b>

# Total Revs For 800 Million Users



**Total All OTTs \$400 Billion /yr(Revs), \$4 Trillion(NPV)**



# Total Revs For 800 Million Users

- **Revs (Billion)   NPV (Billion)**

Facebook	\$20	\$200
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Google	\$110	\$1,100
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Alibaba	\$25	\$250
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Amazon	\$200	\$2,000
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<b>Total All OTTs</b>	<b>\$400/yr</b>	<b>\$4 Trillion</b>
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# Equiano Africa Landing Points

Country/Island	Investment (M)	Potential Revs (M)	Valuation (M)
Canary Island	\$30	\$120	\$980
St. Helena	\$30	\$0.4	\$2
South Africa	\$30-\$50	\$4,700	\$25,800
Namibia	\$30-\$50	\$200	\$1,100
Angola	\$30-\$50	\$2,500	\$13,500
Nigeria	\$30-\$50	\$15,600	\$86,000
Portugal	\$30-\$50	\$820	\$4,500
Morocco	\$30-\$50	\$3,000	\$16,300
Mauritania	\$30-\$50	\$360	\$2,000
Senegal	\$30-\$50	\$1,300	\$7,200
Sierra Leone	\$30-\$50	\$600	\$3,400
Ghana	\$30-\$50	\$2,400	\$13,000
Cote D'Ivoire	\$30-\$50	\$2,000	\$11,000
<b>Total</b>	<b>\$390-\$610</b>	<b>\$33,600/yr</b>	<b>\$185,000</b>

# Simba Africa Landing Points (1)

Country/Island	Investment (M)	Potential Revs (M)	Valuation (M)
South Africa	\$30	\$850	\$7,200
Namibia	\$30	\$40	\$340
Angola	\$30	\$460	\$3,910
Nigeria	\$30	\$2,900	\$25,000
Portugal	\$30	\$150	\$1,300
Morocco	\$30	\$550	\$4,700
Mauritania	\$30	\$70	\$600
Senegal	\$30	\$240	\$2,000
Sierra Leone	\$30	\$110	\$950
Ghana	\$30	\$440	\$3,800
Cote D'Ivoire	\$30	\$370	\$3,200
Mozambique	\$30	\$450	\$3,800
Tanzania	\$30	\$875	\$7,500

# Simba Africa Landing Points (2)

Country/Island	Investment (M)	Potential Revs (M)	Valuation (M)
Madagascar	\$30	\$400	\$3,400
Kenya	\$30	\$750	\$6,400
Somalia	\$30	\$225	\$1,900
Ethiopia	\$30	\$1,650	\$14,000
Sudan	\$30	\$600	\$5,100
Saudi Arabia	\$30	\$500	\$4,200
Egypt	\$30	\$1,500	\$13,000
Libya	\$30	\$90	\$770
Tunisia	\$30	\$180	\$1,500
Italy	\$30	\$3,600	\$30,000
France	\$30	\$4,000	\$35,000
<b>Total</b>	<b>\$720</b>	<b>\$21,000/yr</b>	<b>\$178,500</b>

# Equiano Investment Summary

- Cost of building Equiano: Around \$300 Million
  - Private cable
- Expected cable revenues from carriers: \$390-\$610 Million
  - After Google keeping 50% of bandwidth for its own use
- Potential advertising/cloud revenues: \$33.6 Billion/year
- Potential valuation at those revenues: \$185 Billion
- Serving 400 million people

# Simba Investment Summary

- Cost of building Simba: Around \$800 Million
  - Consortium cable
- Expected cable revenues from carriers: \$720 Million
  - After Facebook keeping 10% of bandwidth for its own use
- Potential advertising revenues: \$21 Billion/year
- Potential valuation at those revenues: \$178 Billion
- Serving 1.3 Billion people

# Real Bad News For Carriers

- Carriers pay 100% for the CAPEX of the branches
- And they pay 100% for the O&M of the branches in addition to their share of the main cable



# Branching Unit Case Study

**Sea-Me-We-5 vs Tagare Cable (AAE-1)**



# SFA-MF-WF 5

# Tagare Cable Renamed As AAE-1



# Absolute No-No

Under no conditions should you accept to pay 100% of the CAPEX and O&M for any branch

Just walk away

# Massive Technological Change: SDM

4 fp, 1 Tbps Design:  
2000

8 fp, 20 Tbps  
Design: 2010

16 fp, 320 Tbps  
Design: 2020

24 fp, 500 Tbps  
Design: 2022

48 fp, 1Pbps Design:  
2025

# Massive Price Declines

\$1,000/Mbps: 2000



\$400/Mbps: 2010



\$80/Mbps: 2020

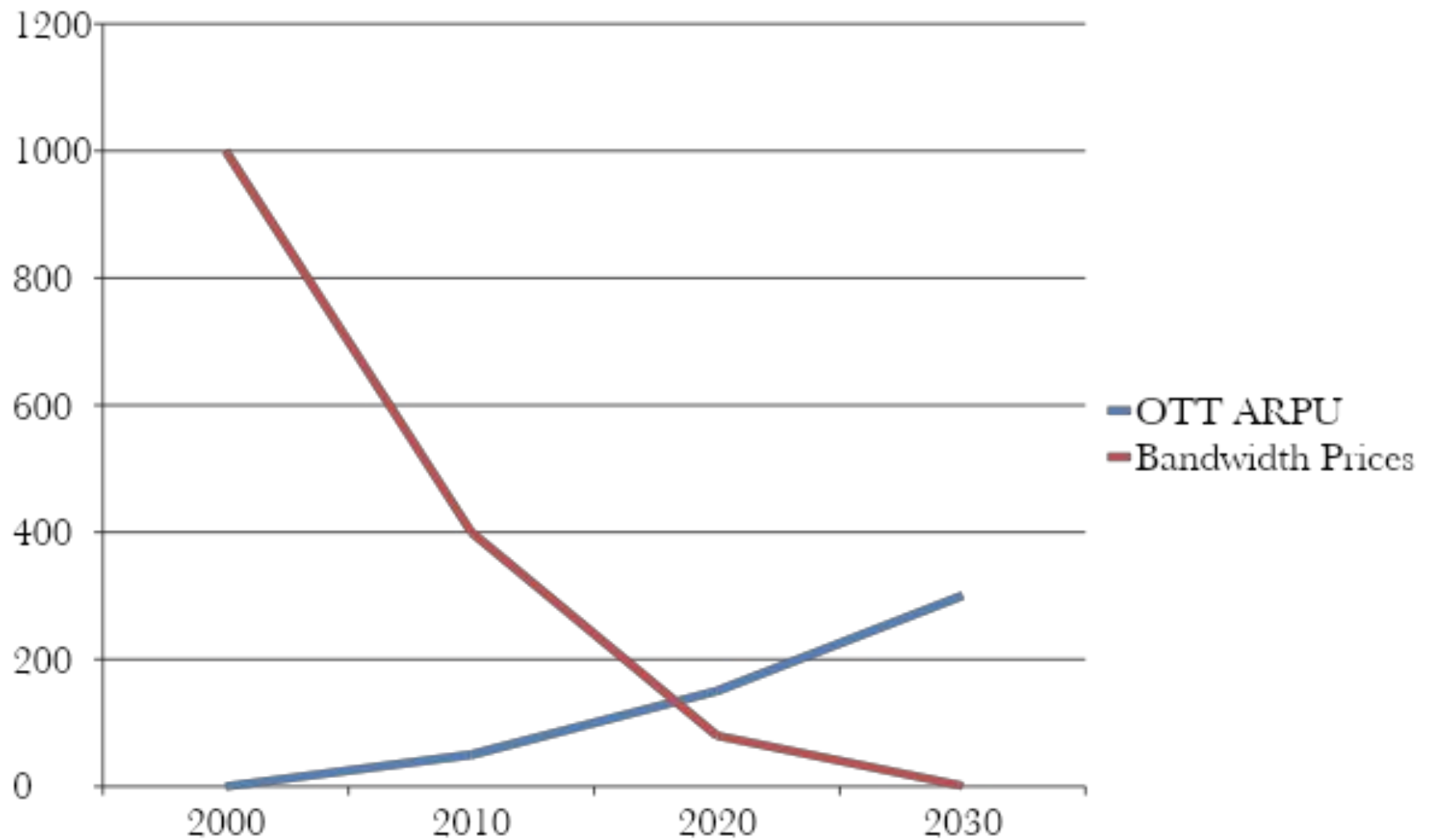


\$20/Mbps: 2022



<\$1/Mbps: 2025

# OTT ARPU vs Bandwidth Prices



# There Is A Possibility

**Both Simba and Equiano will be economically obsolete in 5 years if a new cable is announced**

**Example: TAT-14**

**O&M more expensive than bandwidth**



# On The Issue Of Fiber Switching

**Fiber Switching only helps the OTTs**

**Africa Should Be The Last Continent To Get This**

**Just Say No**

# More Fiber Is Good For Africa

**But entire Eco-System has to survive**

**It's Not A Zero Sum Game**

# What Do OTTs Want?

- Access to eyeballs
- By spending as little as possible on bandwidth
- Do not want to pay taxes in any jurisdiction
- Do not want to be regulated as a carrier
- Better quality of bandwidth than their competitors

# Traditional Problems of Carriers

- Confused -- not understanding who the competition is
- Monopoly mindset thinking they are the only ones who can build a cable
- Screwing each other on cable station access and last mile
- Example: India
- OTT reaction: Divide and Rule like East India Company

# Business Problems of Carriers

- Most telecom services given away for free by OTTs
- Many enterprise services will not need IPLC connections
  - IP connectivity through VPNs
- Wholesale business is dead
- Aggressive OTTs want free services
  - Free data center space
  - Free power
- Customers do not like carrier-owned data centers
  - Rise of carrier-neutral data centers

# Over Capacity in Africa

- Equiano and Simba each can reach up to 500 Tbps of future capacity (Shannon Limit)
- On the West Coast, that represents 1 Pbps of capacity
  - Not taking in to account all the other cables in the region
- How many countries in Africa have requirements of more than 10 Tbps capacity today?
- How many Hyper Scale Data Centers are present in Africa today? In which countries?

# Internet Infra Business Is Changing

- NOIA Network
- Spare capacity exchange network
- IPV6-based segment routing (SRV6)
- Programmable Internet
- Blockchain-based
- Start of a major trend that will change the industry

# Traffic Flows Will Change For Sure

- Trans-Atlantic bandwidth was once hot property
  - NY/Virginia center of gravity shifted to Europe
- If India becomes the next hyper-scale haven
  - Fixed circuits to Europe could be expensive and obsolete
- New satellite networks will create a distributed network instead of a hub-and-spoke network
  - SpaceX, Amazon, OneWeb
  - Entirely different traffic flow requirements
- Buying on point-to-point cables for 25 years is a bad idea
  - Portability will be a mandatory requirement



# Differences in Equiano And Simba

- Equiano is a private for-profit cable
  - Simba is a consortium cable
- Equiano CIF is signed. It is a Spec cable
  - Simba is waiting for everyone to sign in order to commit
- Equiano will provide monopoly to one carrier per country
  - Simba can have more than one partner per country
- Equiano owns the branch paid by customers
  - In Simba, customers have to own the branches

# Historical Actions of OTTs

- In all of the trans-Atlantic cables, the OTTs have swapped fiber pairs with carriers after signing the CIF
- The original partners who were guaranteed exclusivity now feel cheated as new competitors emerged overnight
- With 16 fiber pairs, expect more of the same from the OTTs in Africa
- Goal of OTTs is to make the cost of transport ZERO
- And with open cable landing stations, carriers will face intense competition in last mile charges

# Solution?

**Time Is On The Carrier's Side**

**And Time Is The OTTs Biggest Enemy**

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# Most Important OTT Strategy

**Divide And Rule**

**Imperial War Strategy**

# Recommended Carrier Strategy

**Carriers In Each Country Unite**

**And Speak In One Voice**

# What Is Fair?

**Carriers signing up to Equiano and Simba get 20% of bandwidth for free**

**With Zero Investment**



# In Return, OTTs Get

**Regulatory cover**

**Taxation cover**

**Free CLS**

**Free Last Mile to Carrier-Neutral DC**

# My Recommendation

**Stop investing in submarine cables**

**Invest in the domestic network**

**Swap what you have to get free  
bandwidth on new cables**

# Carrier Savings In Equiano & Simba

**\$1.5 Billion Total  
(including O&M)**

**\$50 Million per Carrier  
(30 Carriers)**

# Remember

**OTTs Have No Other Choice**

**They Must Invest**

Also

**It is in the interest of OTTs**

**Time, Time, Time.....**

# Eco-System Has To Survive

**Think Long-Term**

**It's A Marathon**

# Thank You

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