The Tech Downturn: Submarine Cables

PTC ’23 - Honolulu

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- Co-Chair, Wireless Committee, Federal Communications Bar Association
- Certified Information Privacy Professional, International Association of Privacy Professionals
- Lecturer, Privacy and Internet Law, Boston College Carroll School of Management
  - JD. Emory University School of Law;
  - M.A. North Carolina Central University
  - B.A. University of the South - Sewanee
- Areas of practice: privacy, mobile, wireless, data centers, wireline regulation, spectrum regulation
- Transactions and regulatory law
Tech Downturn: Google & Facebook are in rough surf

**Alphabet** down 42% v.2021

**Meta** down 63% v.2021

**Nvidia** down 50% v. 2021

**Amazon** down 46% v. 2021

**Microsoft** down 35% v. 2021

**Tesla** down 47% v. 2021

Reports of 11,000 employees laid off

Market Cap loss of $600 Billion
Submarine Cable: Purpose for constructing?

- Alphabet/Google
- Meta/Facebook
- Amazon
- Microsoft

“Shipping” content – YouTube, Cloud, Gaming

Dramatic shift in 10 years from using undersea cable for “information” like voice calls, news

TeleGeography: From 6.3% to 78% by 2027
Purpose for Google’s Undersea Cable
“Shipping Goods” – YouTube and Cloud

Topaz example: “delivering low-latency access to Search, Gmail and YouTube, Google Cloud, and other Google services

but also increasing capacity to the region for a variety of network operators in both Japan and Canada.”

-Google Cloud Blog, April 2022
The Tech Downturn: Submarine Cable is CapEx

- Undersea Cable requires Capital Expenditures

- **Alphabet/Google** is the largest undersea cable in terms of investment
  - 20 cables, ~182,000km
  - ~$5.1 Billion total
  - ~$340M/year average, ~1.4% total/yr

- **Meta/Facebook** is second in undersea cable

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What will be cut from spending?

- Employees?
- Expenses?
- Capital Expenses?
- 1. Data Centers?
- 2. Fiber?
- 3. Servers?
- 4. Undersea cable?
- 5. All categories?
The Tech Downturn: Alphabet, in a rip current?

Down 42%
Market Cap loss: $800B from Market Cap $1.15 T from $2.0 T
The Tech Downturn: Alphabet is in rough surf

Alphabet CapEx – Year to Year

Not all bad
For example
Cloud grew 3Q22

$6.9 B
in cloud revenue
a 38% jump
The Tech Downturn: Alphabet CapEx is decreasing

Alphabet CapEx –% of Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>CapEx % of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>11.9%</td>
</tr>
<tr>
<td>2018</td>
<td>18.4%</td>
</tr>
<tr>
<td>2019</td>
<td>14.5%</td>
</tr>
<tr>
<td>2020</td>
<td>12.2%</td>
</tr>
<tr>
<td>2021</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

But Employees Up

10,500 employees

2021 156,500

2022 187,000
Alphabet CapEx by Quarter – % of Revenue

- 4Q21: 8.50%
- 1Q22: 14.40%
- 2Q22: 9.80%
- 3Q22: 10.50%
The Tech Downturn: Alphabet’s Quartely CapEx Level

Alphabet CapEx by Quarter – % of Revenue

CapEx is not increasing By Quarter

Limited Growth
The Tech Downturn: Meta is Tightening the Hatches

➢ Meta down 65% year over year
➢ “Reducing hiring” in 2023
➢ “Significantly slowing our hiring”
➢ “Cutting expenses” by “$1-$2B” in 2023

“Zuckerberg’s $10-billion-a-year investment” in Meta
The Tech Downturn: Meta is Tightening the Hatches

Down 73%
Market Cap $348B
The Tech Downturn: Meta CapEx Increasing Annually

Meta CapEx: Year to Year is Increasing

CapEx Grew in Total

Year to Year

$18.6 Billion
The Tech Downturn: But CapEx is trending down by $17

Meta CapEx –% of Revenue

CapEx Decreased
As a % of Revenue
But Revenue increased
Meta CapEx by Quarter is Growing

CapEx Last Year Grew in Real Terms

By quarter despite cuts in employees
The Tech Downturn: Meta CapEx in 2022 - Growing

CapEx as a % of Revenue

- 4Q21: 15.9%
- 1Q22: 19.5%
- 2Q22: 26.3%
- 3Q22: 33.8%

CapEx Grew As a % of Revenue
Undersea cable total OTT Spend Minimal

- **OTT Total CapEx Spend**
  "Ball Park" estimates

- **2010 to 2024**: ~$10.0 B OTT total undersea cables

- **2022 to 2024**: ~$3.0 B OTT total

- **CapEx /year 2010-2024**: ~$0.70 B /yr

- **CapEx /year 2023-2024**: ~$1.5 B /yr

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**Undersea Cable CapEx Comparison with Mobile**

- **Verizon CapEx** in 2022: ~$22.5 B
  ~$6 B on C-Band Deployment

- **Comparison**
  Total OTT Annual Undersea Cable Capex is 3% of Verizon’s CapEx
OTT Undersea Take Aways

➢ The FCC treats undersea cable as “second fiddle” to satellites ~Kent Bressie

➢ $10 Trillion every day in financial transactions transported on undersea cable

➢ 95% of the international content and data is transported on undersea cable

➢ “Out of sight, out of mind” The average executive globally has no idea that undersea cable plays such an important financial role
Cost cutting may be across the board and include future undersea cable projects

1. C-Suite will understand that cuts to undersea cable projects will dramatically hurt future revenue, and will continue to fund capex there

2. If there are cuts, a downturn in undersea cable projects could be on the horizon

- Private builds serving content providers
- Alphabet or Meta exiting the business and selling undersea to operators

“Trees Don’t Grow to the Sky.”
Thank you!

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