

Our Industry in 5-10 Years???

ITA
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Known Knowns

Known UnKnowns

UnKnown UnKnowns

*“Plans are worthless but planning is
everything.”
Dwight D. Eisenhower*





USF RECOVERIES

STAFFING

BUILD-OUT
OBLIGATIONS

TECHNOLOGY

CHANGING

COMPETITION

BUSINESS PLAN

DEMOGRAPHICS & NEEDS

Are You Ready?





Changing technology?

Are we keeping up?



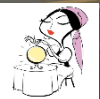


Broadband is Future

We have Broadband

Now What?

Changing Rural Customer Base?



Owners & Staff

Succession Planning

Skill
Sets



Org Chart
Update



Next Generation?

Unstable Regulatory World

FCC issues orders than later clarifies:

- ACAM \$200 per location, then NOT
- 2nd ACAM Opt-In
- Budget Control Mechanism – Lose \$\$ then it's returned
- CBOL
- Ineligible Expenses



Are You in Control?

Form 481 -
5-Year Plan

Your Plan

Their Plan

HUBB -
Build-Out
Obligations





How Will Change Affect My Business

Revenue?

Product Changes?

Customer Requirements?

Operational challenges?

IT security?

Staffing?

Competitors?

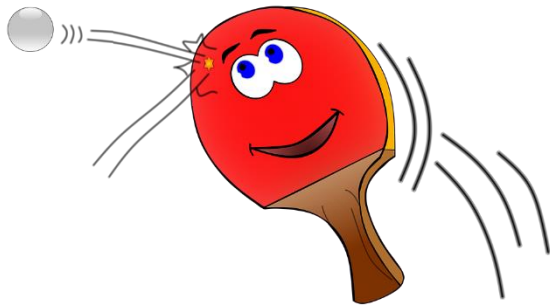
**Should we
BUY
another
Telco?**

**Should we
SELL
ours?**





Impact of “ping pong” Regulation



Will the rules change
back and forth every
time the party in the
White House
changes?

FCC vs Congress

Will Congress impact FCC?

- Net neutrality legislation vs FCC ping pong
- New Telecom Act within 10 years?
- Republican Congress support Pai initiatives?
- Democrat Congress punish Pai?



FCC – Internal Issues

Inside the FCC

- New building
- New bureau
- Budget battles
- Consumer Interests politics



FCC – Rural Telcom Support



- Federal USF in 10 years
 - After build-out obligations
 - ✓ Speed obligations?
 - ✓ Support for maintenance/operations
- Distribution mechanisms
 - Legacy vs. model vs. auctions
- Who will be the winners and losers?

Oversight

- Future Reporting Demands?
- Enforcement?
 - Compliance with Build-Out Obligations
 - Audits
 - Privacy



State vs Federal

- Will States carry more of the USF burden?
- Will States stop providing support?
- Contribution Reform?



Future Team?



Is **CURRENT** Staff the **FUTURE** Staff ?????

- Staffing challenges?
- Retirements?
- Skill Sets appropriate to changing business plan?
- In-House vs. Out-Source?
- Staff Morale with Changes?





Face of Your Company in 5-10 Years?

Traditionalist
1922-1945

Millennials
1980-2000

Generation Z
2000-----

Generation X
1965-1979

Boomer
1946-1964



How to Work Together?



Traditionalist: Straight forward with respect. Standard business hours.

Boomer: Works nights and weekends. Keep challenged or loses interest. Verbal!!



Generation X: Need deadline but flexibility to achieve it

Millenials: Works at night from home and checks Facebook during the day, why is that wrong?

Generation Z: Communicates via technology



Is there Common Ground?





SUCCESSION PLANNING

Who will be running the Company?

- Family?
- Internal Promotion?
- Someone new?

FAMILY-OWNED BUSINESS

Approximately 70% of all Family Owned Business last just one generation



Since 80% of all businesses are family owned, that could have alarming consequences



Father merchant,
son gentleman,
grandson beggar
Mexico

Shirtsleeves to shirtsleeves
American



Rich father, Noble son, Poor
grandson
Brazil

Wealth never survives three
generations *China*



From the stables
to the stars and
back to the
stables

Italy

Family Owned Company

- What if kids don't want the job?
- What if there are no kids?
- How will role of Family Board change with non-family GM?





New General Manager??

- Internal Promotion
- External Search
- Contract with neighboring Telco
- Merge Company
- Sell Company

The Right Skill Sets?

Analog vs Digital?
5ESS vs Meta?
SIP Phones?
Fiber vs Copper

Social
Media
Marketing?

Geek
Squad?

CSRs programming ?

Security
Devices?

??????



In-House ? or Out-Source ?





Staff Morale

- Afraid of Changing Regulatory Environment
- Adjusting to new Business Plan
- Working with Changing Staff
- Dealing with Changing Salaries or Benefits as USF shrinks?



STAFF For the Future



- Align workforce with goals
- Organizational Structure
- Recruitment & Retention or Out-Source
- Leadership development and succession planning



Changing Technology / Habits

- Technology is part of every day life
- User habits change over time
- New technologies allow new habits
- New habits yield new technologies



A common thread to nearly all these technologies and habits is bandwidth

Trending Technologies

- Wireless
 - Cellular 4G/5G
 - Satellite
 - Spectrum
- Entertainment
 - IPTV
 - Over-the-Top's
 - Cord Cutters?
 - Gaming
- Home Automation
- FTTH
 - 1Gig Fiber Options
- Cloud Computing
- Smart Grid
- Social Media

What is 5G?

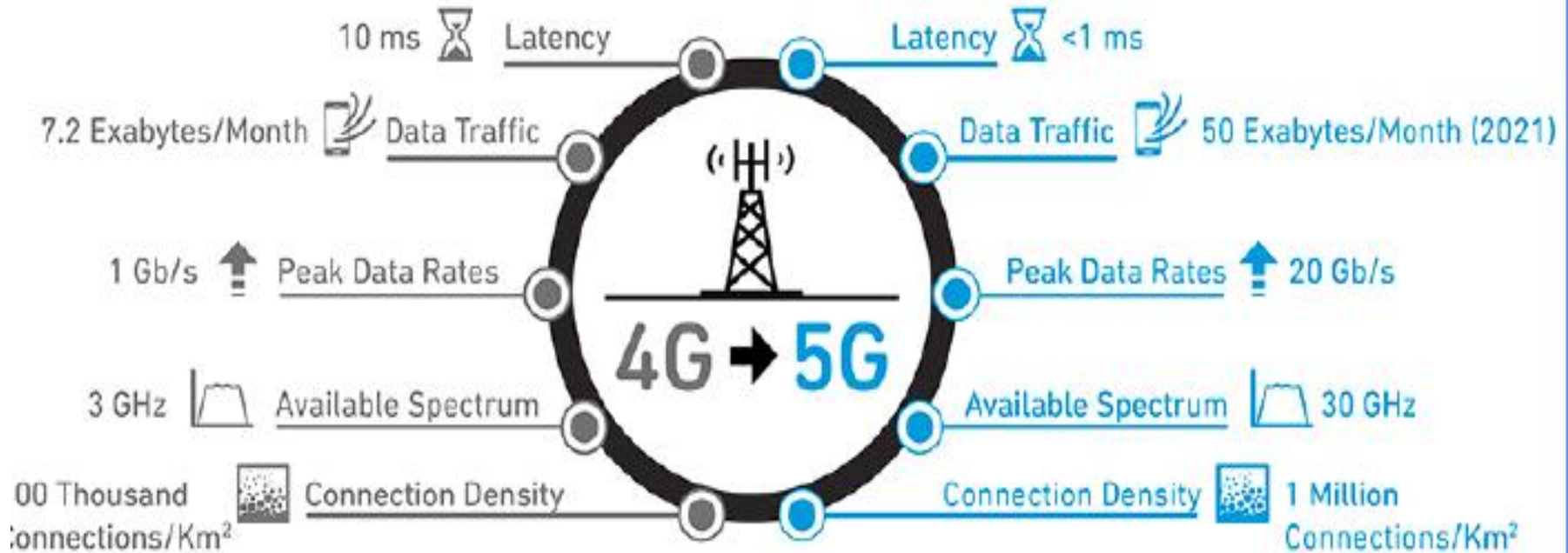
When people talk about “5G” they're actually talking about a collection of technologies, most of which remain in development. It's still not clear whether 5G will turn out to be a compound collection of various technologies or whether there will be a deeper integration that ties them all together. So when people discuss 5G in the media, they often emphasize very different technologies to explain it. So it's a simple, umbrella term for multiple technology advancements still under development.



Ivan Seskar, Co Chair of the IEEE 5G
Working Group



Comparing 4G and 5G



The Internet of Things is Growing

New generations of “connected” devices will change home networking and bandwidth consumption

- By 2020, the average home will have 50 internet connected devices



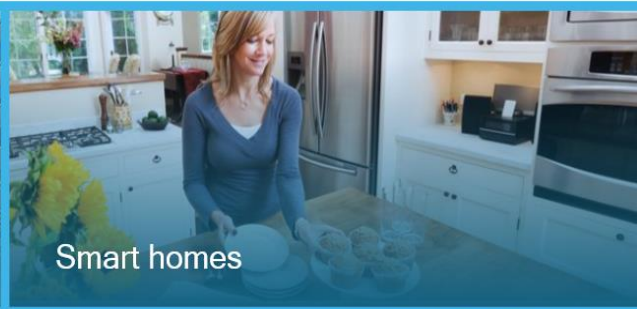
Source: Gigaom, Parks Associates,
The Wall Street Journal, stltoday.com

Connecting the massive Internet of Things

Optimizing to connect anything, anywhere with efficient, low cost communications



Smart cities



Smart homes



Utility metering



Wearables / Fitness



Remote sensors / Actuators



Object tracking

Power efficient

Multi-year battery life

Low complexity

Low device and network cost

Long range

Deep coverage

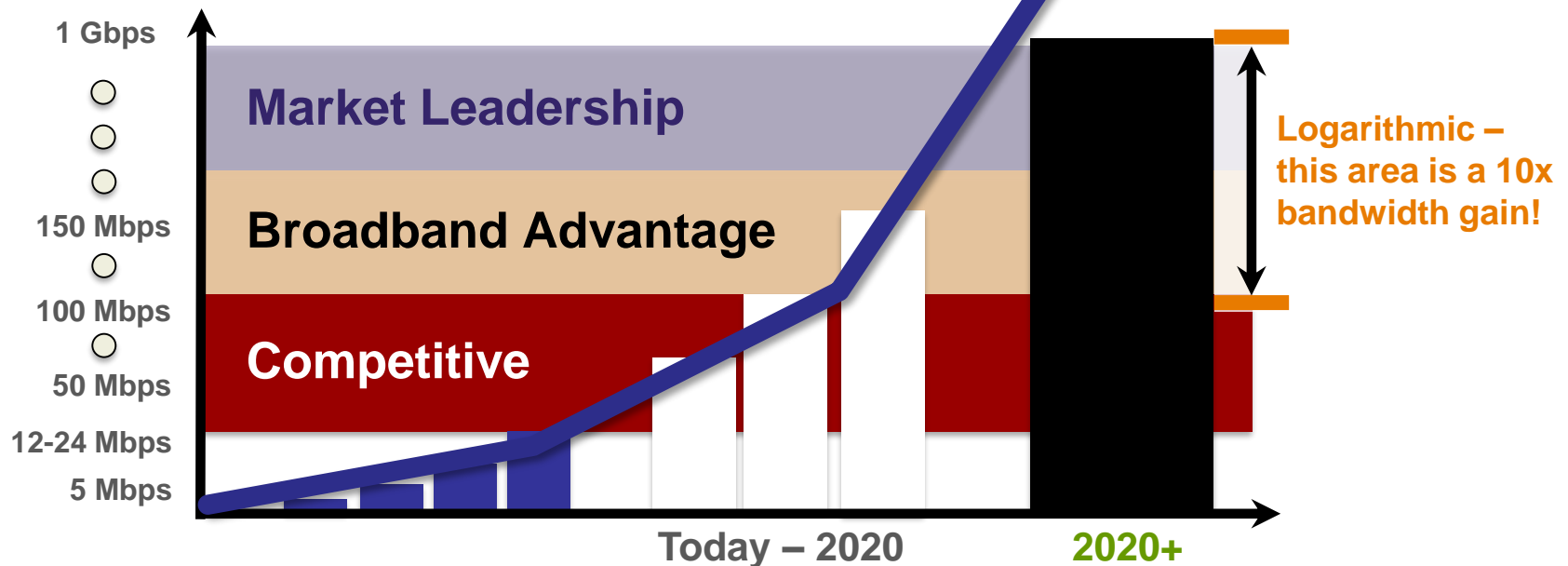


Bandwidth: Exponential Growth

Consumer bandwidth driven by “connected” devices

Internet of ‘things’ doubling bandwidth every two years

- ▶ Consumers will pay a premium for speed, convenience
- ▶ Higher speeds increase broadband value, customer satisfaction





Do we Need a Gigabit Business Case

- Offering a Gig enhances the fiber business case
 - Fiber operators are showing better take rates
 - Instead of 30-40% take rates, some achieving 60-70%+
 - Gigabit continues to get consumers attention



Self Driving Cars?



6 things

I learned from riding in a
Google Self-driving Car



1. Human beings are terrible drivers.
2. Google self-driving cars are timid.
3. They're cute.
4. It's not done and it's not perfect.
5. I want this technology to succeed, like ... yesterday.
6. It wasn't an exhilarating ride, and that's a good thing.





Drones!





More Bandwidth Needs?

- Home Automation, Security Continue to grow
- 4G in more new cars
- Apps Apps Apps!
- Home Healthcare
- Wearables
- Smart watches
- Voice and Facial Recognition
- Big Data



Will We Fit With the New Technology

- Technical, regulatory, competition and consumer demands/changes, require telco's to respond to stay competitive and viable
- Both short term and long term strategic plan development will be critical to every organization





Future Business Plan: Regulated vs Non-Regulated

- Lines are getting blurred (voice vs broadband)
- Regulated Services future recovery?
- Cost control will be very important for regulated and non-regulated business

What Will Be The New Product Strategy

- Market Research: What is needed
- Customer Retention vs Making \$\$
- Expanding Service Offering
- Alliances





*"It is a great little product, but we're still
working on packaging and handling."*

Who Will Your Competition Be?

- Wireless
- Satellite
- Guy in the Basement
Miles Away



Managing Future

Anticipation

Preparation

Staffing

Competitive



How Do We Manage Change?

- Recognize Company's Current Position
- Identify Areas To be Changed
 - Chosen or Imposed
- Strategize Future Path
- Implementation Plan
- Constant Monitoring & Adjustment





OUR RURAL COMMUNITY

- How Will Changes
 - Affect Community Dynamic
 - Affect Customer Satisfaction
 - Affect Employment
 - Affect Future of Rural America



Time to:

Adapt

Evolve

Transform



If You'd Like to Continue the Conversation

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