Views on 5G in 3GPP

Scott F. Migaldi

Sr. Research Scientist

September 2015

"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995

This presentation includes "forward-looking statements" within the meaning of the securities laws. The statements regarding the Sprint network, including network performance, speeds, coverage and capabilities, build economics, business and network efficiencies, timing of deployment, and products and services as well as other statements that are not historical facts, are forward-looking statements and involves risks and uncertainties.

Please refer to our Form 10-K and Form 10-Qs for risk factors.

Timeline of Generations

1G
- 1980's: all about voice

2G
- 1990's: all about capacity and text based services

3G
- 2000's: all about rudimentary data service

4G
- 2010's: It's the mobile Internet!

5G
- 2020: Data, connectivity and user experience

Growth of Mobile Data

7X

by 2019

Source: VNI Mobile Forecast 2014-2019

Sprint

Observed trends:
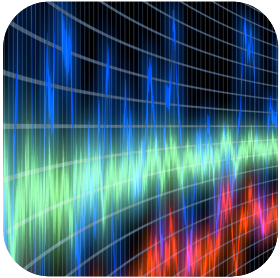
 Interactions becoming more electronic

 Internet everywhere

 Devices becoming smarter

5G: Seamless Information Interactions

Augmented Reality

"It Takes A Network™"

See Sprint Autobahn Connected Lifestyle Video
https://www.youtube.com/watch?v=P5souMYIlhY
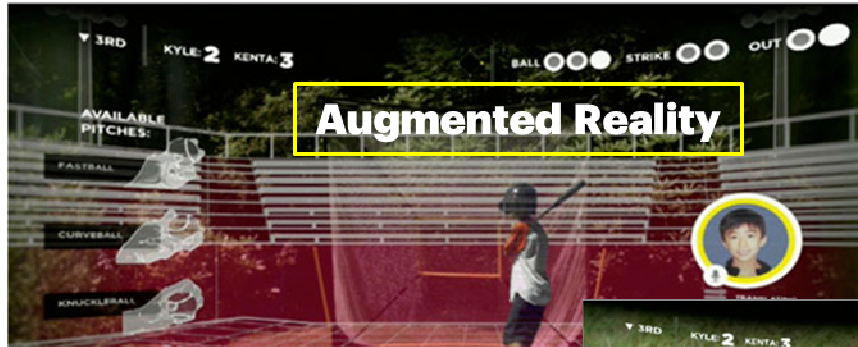
Mobile 2-Way Video
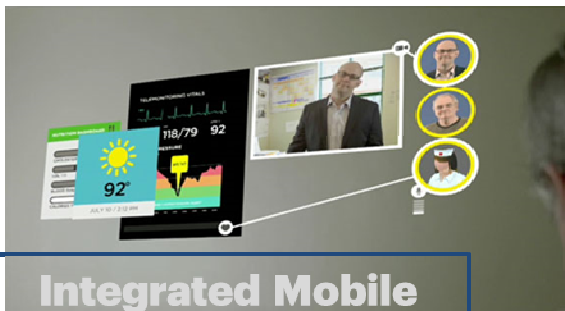
Remote Security/ Entry Authorization

Integrated Mobile Health Management

Capabilities

- > Data throughput
- Lower Latency
- > Coverage
- Mobility
- Traffic Steering
- Multi-RA Integration

Timing

- Global proof of concepts 2018 in Asia
- In US after 2020
- Commercial launches early to mid 2020

Requirements

- Trust
- Usability
- New Spectrum
- Energy Efficiency
- New backhaul solutions for small cells

Sprint

Sprint's Specific 3GPP Needs

- RAN should not make 5G all about just a new air interface

- Ensure that voice is not an afterthought. It should be supported from the beginning of any new AI

- Recognize that networks will be multi-RAT:
- includes SIMless

- Load balancing, traffic steering, intuitive handover are key as any new AI will not be a standalone replacement for LTE

- Any new AI needs to support low to high complexity UEs

- Take a holistic approach to RAN technology

Questions?

Thank you

Sprint