| Summit 2019

Towards IQRF® open standard | since 2004

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Wireless Technologies

Yet another wireless technology? WHY?

APP. FIT

data streaming ⊗

telemetry ✓
control ✓

TOPOLOGY

10+ km
bidirectional
topology: mesh
10 kbps (true speed)
no fees

Excellent Application Fit

SPEED

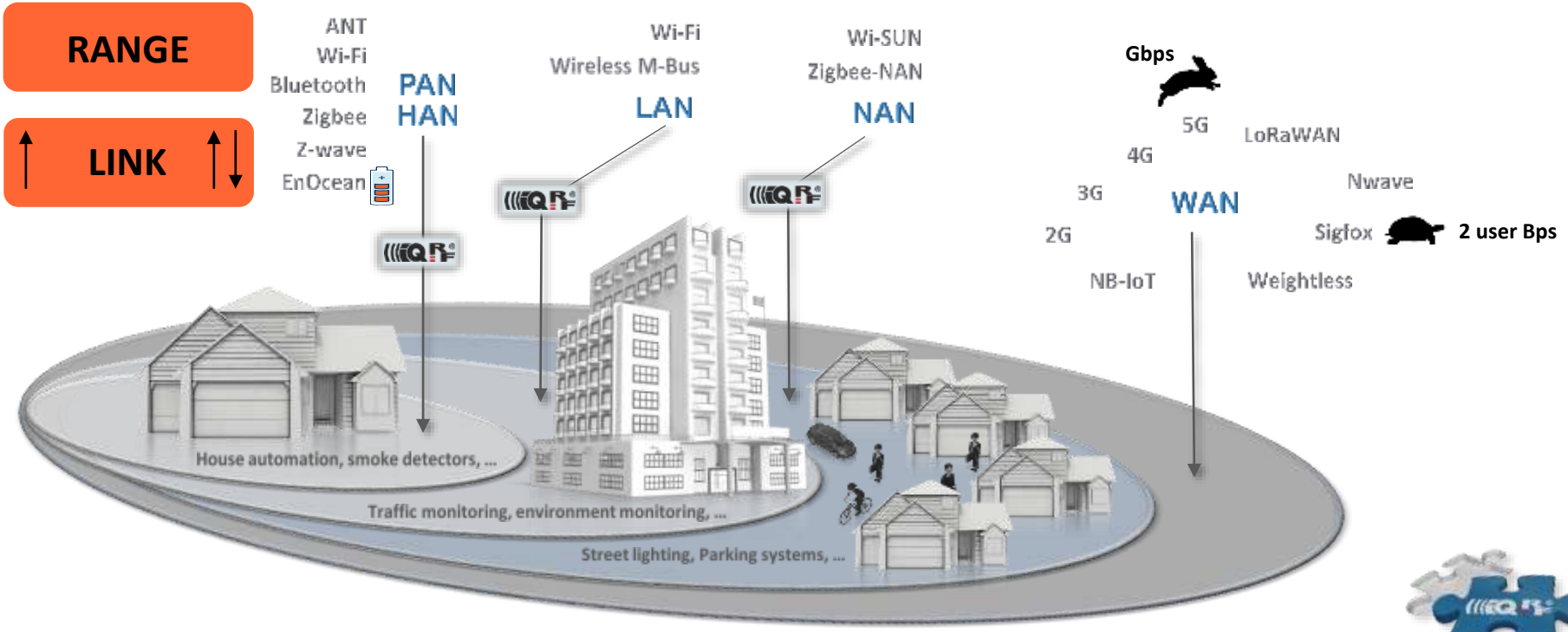
LATENCY

ENERGY

FEES

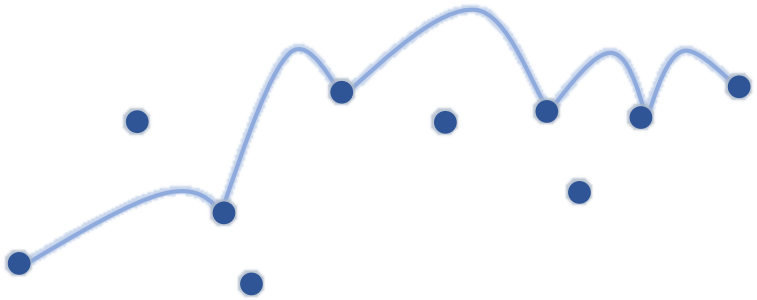
RANGE

LINK



Wireless Mesh Technology

EXTENDS THE RANGE



- IQMESH protocol
- FRC

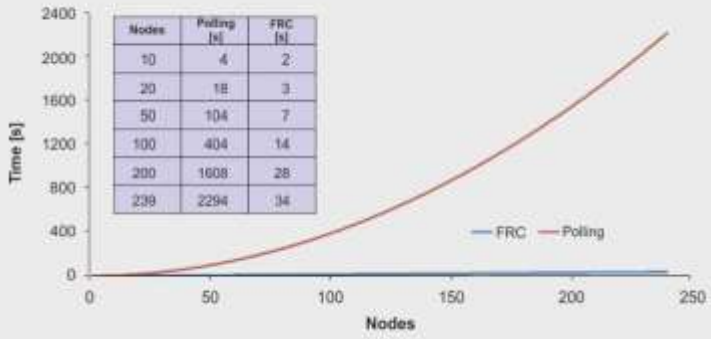
ROBUSTNESS & INDUSTRIAL RELIABILITY

240 hops, deterministic & predictable

LATENCY DECREASE

time dependency linearized, data aggregation

Nodes	Polling [s]	FRC [s]
10	4	2
20	18	3
50	104	7
100	404	14
200	1608	28
239	2294	34



Open Standard. Why?

"Hard" interoperability makes IQRF based products more attractive.

We believe in a community power and in open technologies.

Choosing any chip, any radio, any cloud.

Targeting and Application fit

Industry 4.0

customized apps

rapid development
proven systems
reliability

Smart Buildings

lighting
automation
information
safety & security

interoperability
low power
reliability
no connectivity fees

Smart City

parking
street lighting
traffic monitoring
information systems

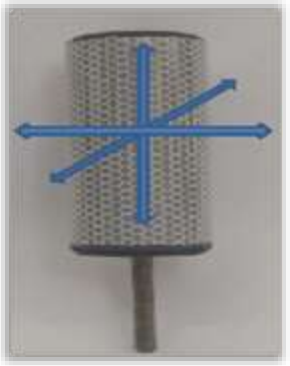
reliability
low power
low maintenance costs

Telemetry

Cellulars
LoRaWAN
NB-IoT

aggregation
penetration

sensors
AMR



Open Standard. What should we do?

Core standard specification

Internal documentation should go public

IQRF PHY: frequencies, timing, speed, modulation

IQMESH protocol: addressing, routing, timing

DPA protocol

DPA commands

Security: based on standards and realizable on any small microcontroller

Network joining mechanisms

Interoperability: functionality should be defined based on device categories

Bit more details related to the transition

IQMESH protocol: measurements, fixing, documentation

Security: simplification, avoiding undocumented layers

Interoperability: backward interoperability without up/down grade

Virtual devices: better LP functionality, simpler deployment

TR-7xD/7xG interoperability

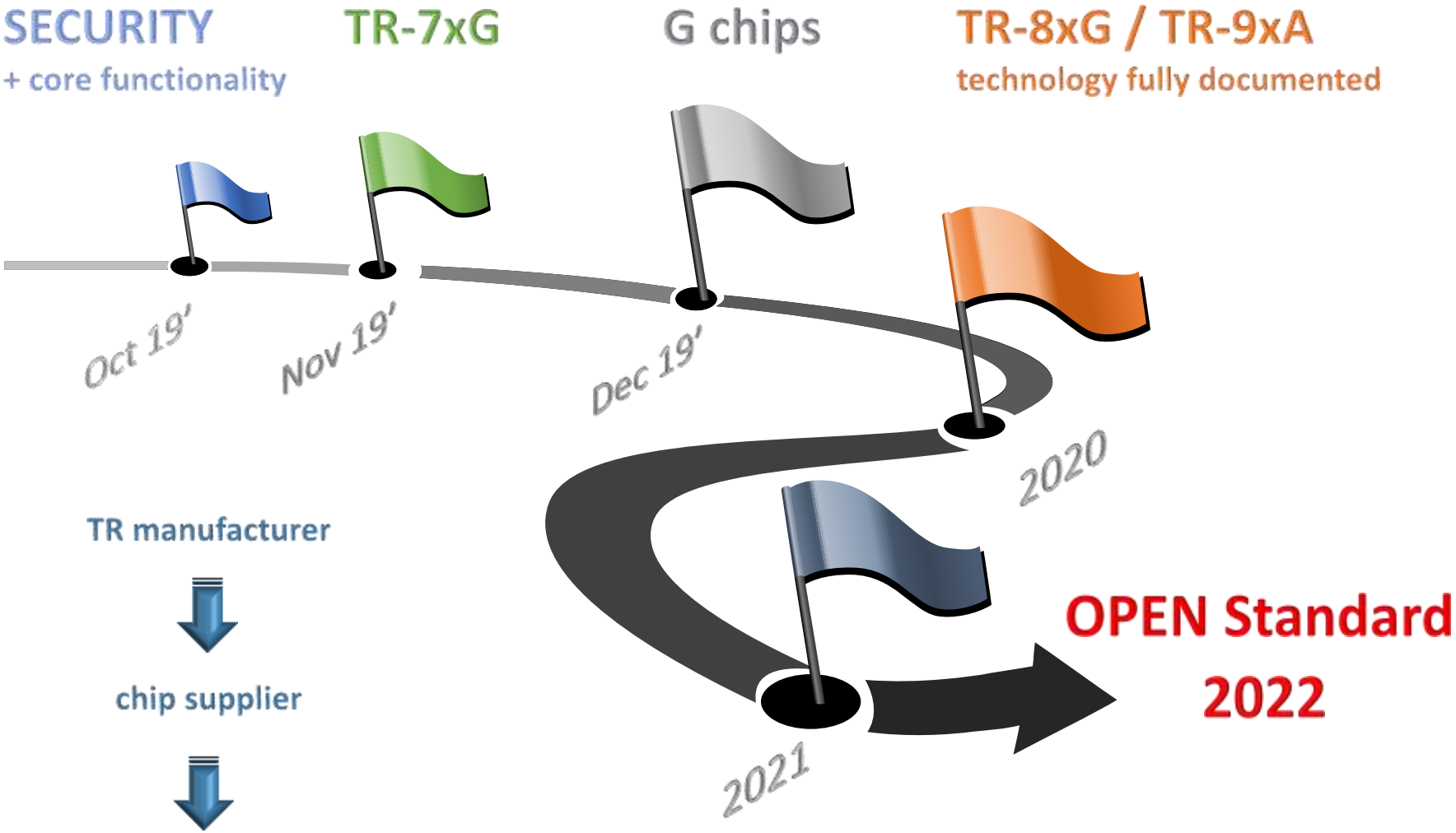
G1 chips

G2 chips

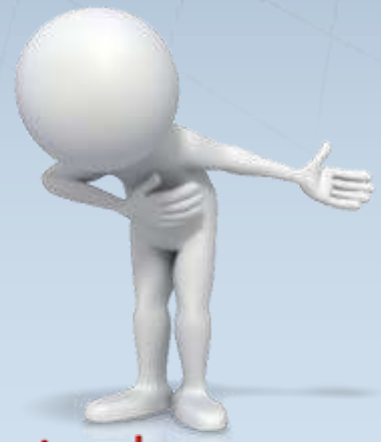
TR-xxA interoperability prove

G3 chips with radio

Roadmap to the Open Standard



Towards IQRF® open standard



IQRF® simply connects devices to IoT through wireless mesh networks.