



5G CASE STUDY FOR THE WINTER OLYMPICS IN KOREA

ITU Regional Seminar: 5G Implementation in Europe and CIS

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Turhan Muluk, Regional Manager & ITU-D Representative

turhan.muluk@intel.com

AGENDA

- 5G and Intel
- 5G Trials
- 5G Winter Olympics Trial
- Success Factors for 5G

GENERAL PURPOSE TECHNOLOGIES THAT CHANGED OUR LIVES



5G will have a similarly significant role

AN ERA OF HUMAN & TECHNOLOGICAL POSSIBILITY



**AUTONOMOUS
VEHICLES**



HEALTHCARE



**EMERGENCY
SERVICES**



**INSTANT
TRANSLATION**



**SMART
CITIES**



**SMART
AGRICULTURE**



MANUFACTURING



**SUPPLY CHAIN/
LOGISTICS**



**VIRTUAL AND
MERGED REALITY**



**MOBILE
OFFICE**

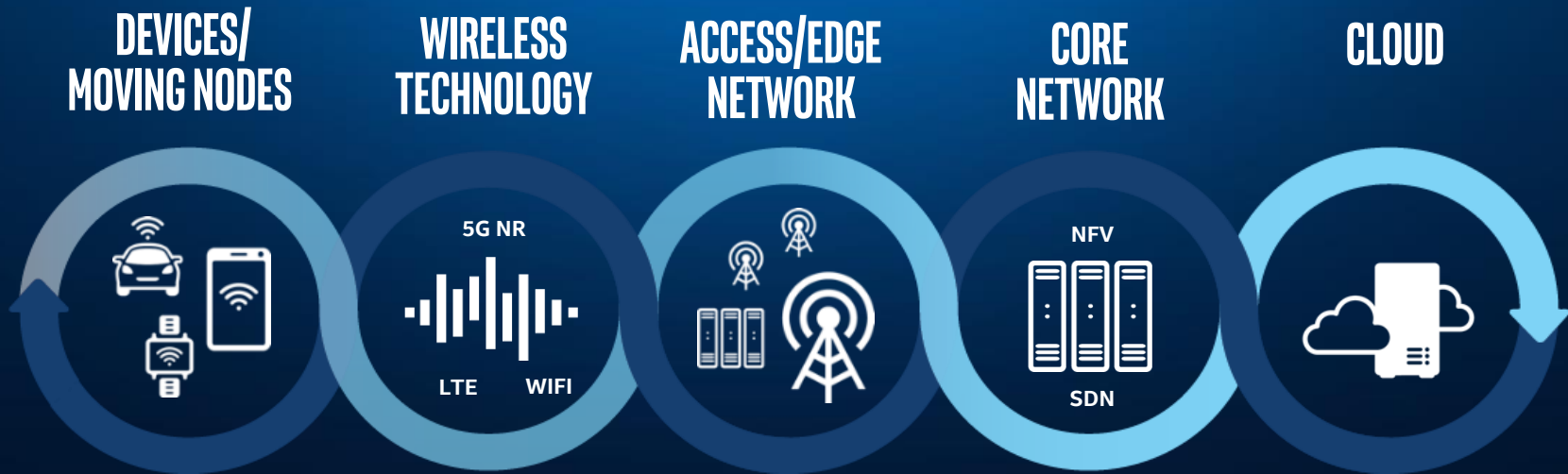


CONNECTED HOME



SMART MEDIA

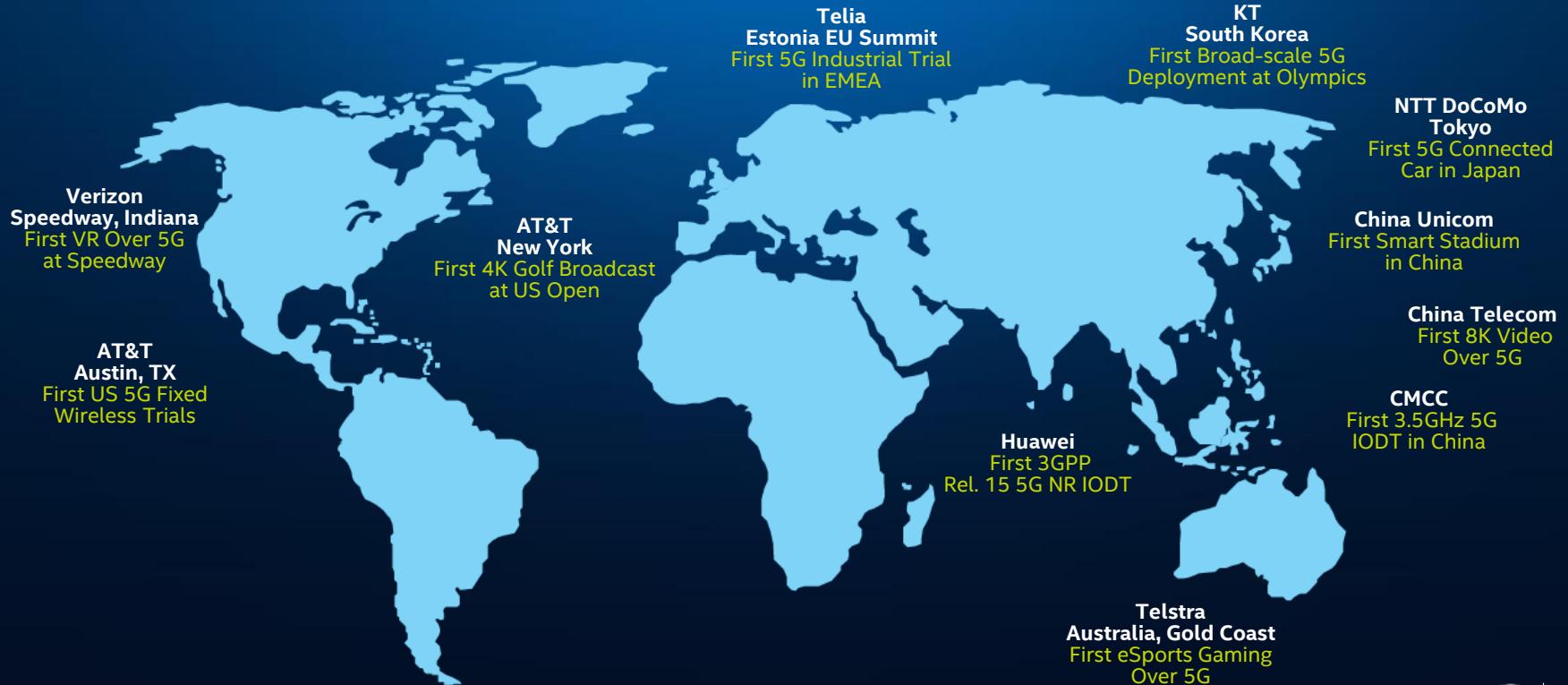
INTEL POWERS 5G END-TO-END (INCLUDING AI)



Intel Wireless Technologies, Intel Architecture, FPGAs, Software, Security



INTEL - COLLABORATING IN 25+ 5G TRIALS ACROSS THE GLOBE



INTEL - 5G WINTER OLYMPICS – KOREA

World's Largest 5G Showcase





SKIING IN 'OMNI-VIEW'

5G connected course: Live cross country viewing

- Multiple cameras capturing videos of the real time skiing action on the course
- Intel 5G MTP(Mobile Trial Platform) delivering High resolution video streams from camera to user devices though 5G air link.
- Viewers watching video from multiple angles and near real time athlete data



'TIME SLICE' ON THE ICE



5G connected arena: Watching multiple camera angles with interactive, streaming HD video

- 100 cameras capturing interactive videos at every angles
- Intel 5G MTP delivering Dozens of time-sliced video steams over low latency 5G links
- Attendees watching time-sliced views of the athletes in motion



ON THE ROAD WITH INTEL GO™ 5G AUTOMOTIVE PLATFORM



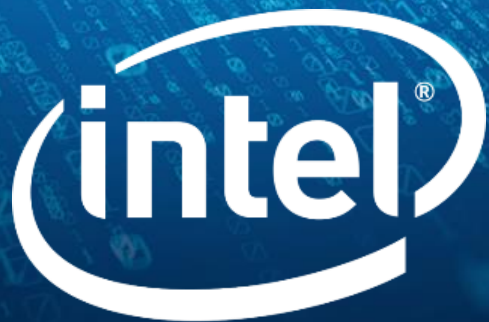
5G connected car experience: Intel 5G ATP(Automotive Trial Platform)

- Gigabit speed and Low latency connectivity between vehicles and mobile networks through mmWave spectrum
- High-definition (HD) map downloads in real time
- 4K UHD video content for in-vehicle infotainment (IVI)
- Sensor data uploads from the vehicle



SUCCESS FACTORS FOR 5G

- **Allocate sufficient amount of low-band, mid-band and high-band spectrum for 5G**
 - Include licensed and license-exempt bands,
 - Consider economies of scale; global harmonization based upon tuning range approach
 - Change regulatory paradigm from dedicated spectrum management to ad-hoc bandwidth/coverage assignment
- **Adopt policies needed to facilitate 5G**
 - Ensuring sufficient backhaul spectrum for 5G (71-76 GHz/81-86 GHz)
 - Fibre policy (Optical fibre is the prerequisite for 5G, V2X, FTTx)
 - Liberalize access requirements to ultra fast networks
 - Targeted, efficient subsidies in high cost areas
- **Establish a National 5G Committee and develop a plan to accelerate the 5G and vertical applications**
- **New EU telecoms framework**
 - Must foster incentive based competition and favor ex-post oversight over ex-ante control
 - Remedies must balance the impact on incentives to make risky, expensive broadband investments.
 - End-users interests and rights must continue to be observed.



experience
what's inside™

THANK YOU!