

/ E2E-aware Optimizations and advancements for the Network Edge of 5G New Radio

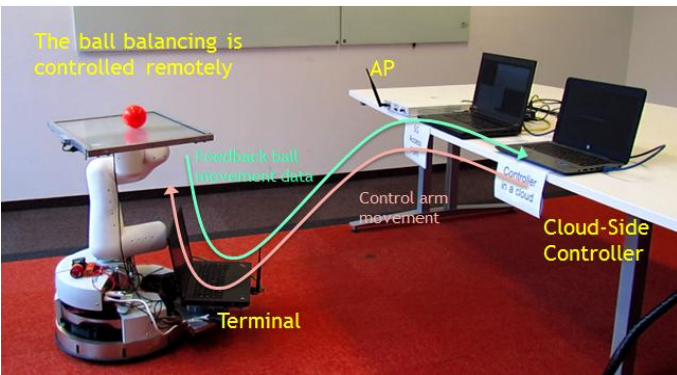
Tele-Operated Robot and Automobile Enabled by 5G URLLC & eMBB



ONE5G PoC Concepts

- Satisfy diverse connectivity QoS requirements of different verticals: factories, agriculture, smart residential areas and automotive, etc.
- Ubiquitous connectivity for narrowing the digital divide between megacities and underserved areas
- Decouple the control logic/intelligence from cyber-physic systems - Enable flexibility for novel deployment and service types.
 - Cloud Robot
 - Tele-operated Driving

Cloud Robot



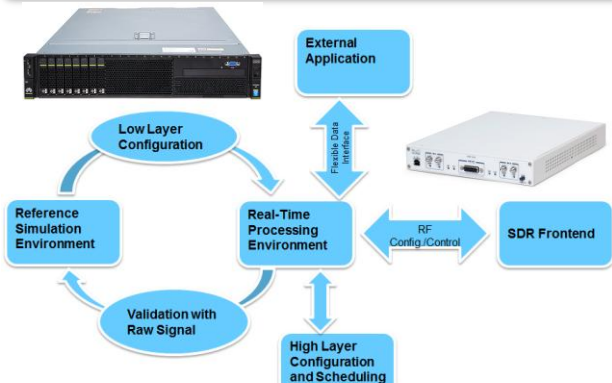
- In current industrial automation environment, many different type of actuator, sensor and controllers are connected by diverse fieldbus
- High demands of wireless connectivity:
 - flexible/elastic deployment & production
 - Increasing application of mobile platform/robot
- High demands of centralizing and softwarizing control and monitor functions for the ease of reconfiguration, upgrade and maintenance

Tele-Operated Driving



- Tele-operated driving can help to solve complicated road situation as complementary solution to L3/L4 autonomous driving
- Attractive for safety and cost reduction: mining, farming
- The remote driver could be both human or AI supported by strong computing infrastructure
- Enhanced situation awareness and coordination

PoC Implementation



- Both PoC are supported by Huawei 5G lite prototype
- Flexible SDR architecture: highly reconfigurable, cross-validation between simulation and realtime test
- Self-contained frame structure supporting <1ms latency
- Reliability enhancement: flexible numerology + advanced modulation & coding + optimal diversity
- Flexible PDCP layer supporting both Ethernet & TCP/IP

MORE INFORMATION

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