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# Contributions to 5G PPP – Strand 1

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# P1: 5G Wireless System Design

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- “Identify and evolve key 5G scenarios and consolidate the requirements”:
  - Definition of scenarios
  - Specification of applications
- “Design a Multi-RAT system ...” / “Integration of innovative spectrum usage concepts (e.g. sharing, pooling...)”:
  - Definition of scenarios for spectrum sharing with other services / systems
  - Development of models for sharing spectrum with other systems, e.g., radars, citizen band, among others.



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## P2: Air Interface and Multi-Antenna, ...

- “Unified multi-antenna support”:
  - Development of models for usage of Virtual MIMO in Body Area Networks as “extended terminals”.
  - Contribution to full dimensional MIMO propagation channel characterisation and modelling.



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# P3: 5G-MTC for Consumers and Professional Communications

- “Concepts for high reliability and availability”:
  - Definition of scenarios and specification of applications.
  - Consideration of application areas in public safety, disaster recovery, environment, and agriculture.



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# P4: New Spectrum, mm-Wave Air Interface, ...

- “Measurements, characterization and modeling of mm-wave channels” and “Research and development of multi-antenna technologies”:
  - Development of models for usage of Virtual MIMO.
  - Contribution to full dimensional MIMO propagation channel characterisation and modelling.
  - Consideration of various applications.



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# P6: Novel Architecture

- “RAN virtualization and cloudification”:
  - RAN architecture
  - Resource management
  - Flow optimisation