

Track 7

5G Channel Impulse Responses

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Christopher Mutschler



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THIRTEENTH INTERNATIONAL CONFERENCE ON

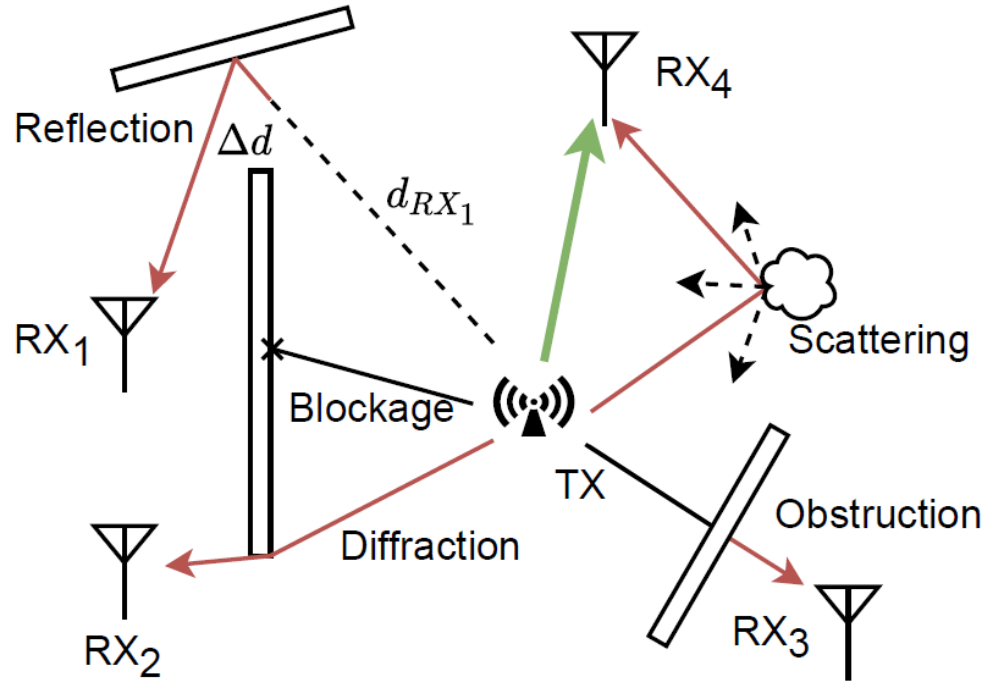
**INDOOR POSITIONING
AND INDOOR NAVIGATION**

25th-28th Sep. 2023, Nuremberg Germany

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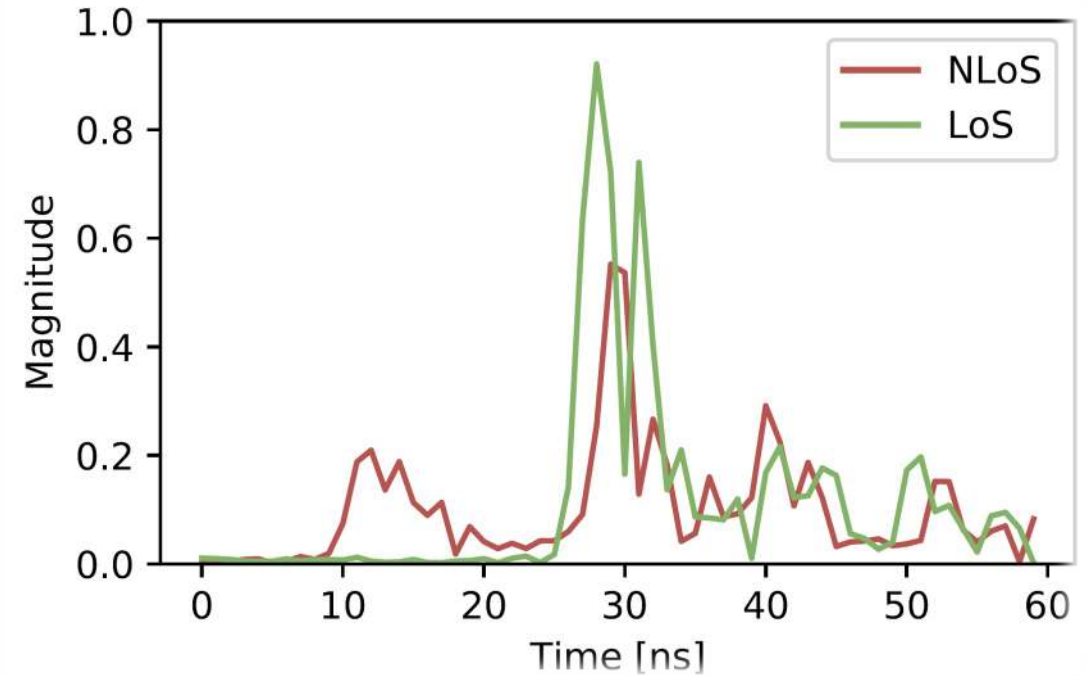
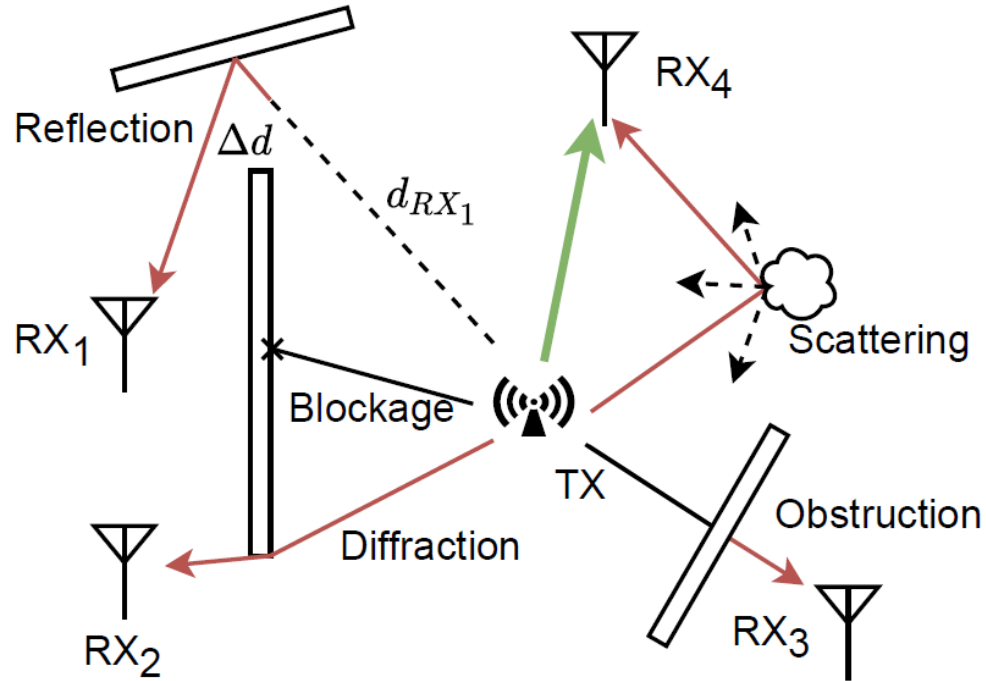
Background



Spatial information in wideband RF propagation

Competition Setup

Channel impulse response



Competition Setup

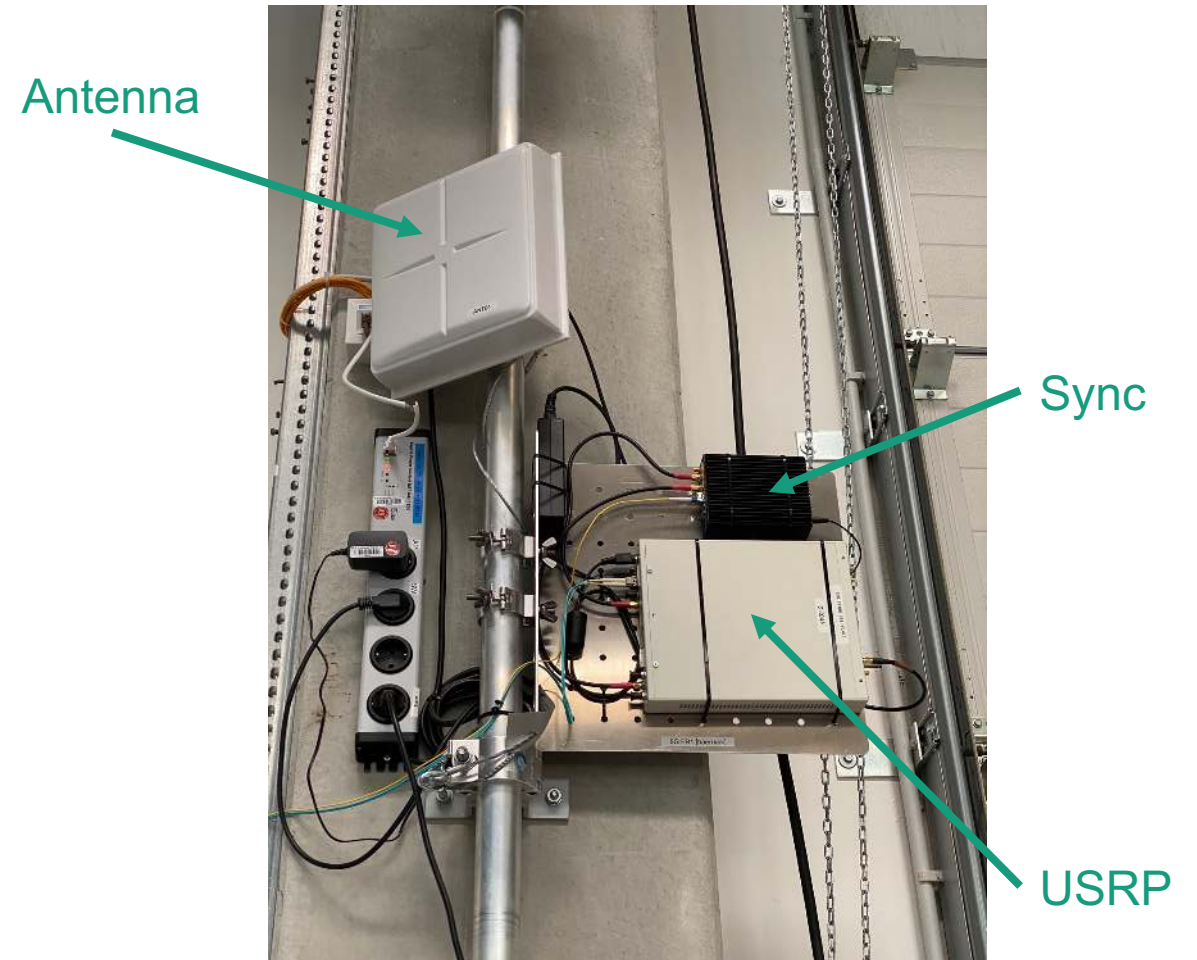
5G PoC Positioning - Testbed

Architecture

- 8 Distributed Radio units (RUs)
- 100 MHz of bandwidth
- Band n78 (3.7 to 3.8 GHz)
- Uplink-TDoA

User equipment (UE)

- COTS 5G smartphone



Results

Team Name	Affiliation	Country	Participants	AE75 (trial 1) in m	AE75 (trial 2) in m
ISCAS	Institute of Software, Chinese Academy of Sciences	China	Chang Su, Fusang Zhang, Beihong Jin		
Byr_Trackers	Beijing University of Posts and Telecommunications	China	Zhou Heyang, He Jiawei, Song Xudong, Li Shude, Zhang Haoyu, Dong Congrong, Zhang Zhichao, Ding Zhenke, Liu Bingxun, Ma Mingyang, Wang Jizhou		

Results



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Results

Team Name	Affiliation	Country	Participants	AE75 (trial 1) in m	AE75 (trial 2) in m
ISCAS	Institute of Software, Chinese Academy of Sciences	China	Chang Su, Fusang Zhang, Beihong Jin	0.40	0.39
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Thank you very much for competing!

Feel free to contact us for additional datasets, feedback and cooperation
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If you have questions about the 5G testbed feel free to contact Maximilian Kasperek
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