Pitch of the Project Proposal

5G Vehicles

John Cosmas, Brunel University
john.cosmas@brunel.ac.uk
Visible Light and mmWave for Trains/Planes/Cars

1 slide:

What is the main benefit of the idea/proposal? Based on existing home 5G network
What makes the added value? 5G within Vehicles and with Infrastructure
Why should I participate in the project? Need for
Train/Plane/Car infrastructure integrator
TrainStation/Airport/Road Infrastructure operator
VLC/mmWave component manufacturer
Smart Phone manufacturer
Light system manufacturer
5G Core Network Provider
Organisation Profile

Viavi Solutions, Test Equipment manufacturer - 5G Physical Layer solution provider
University of Leicester, Electronic Engineering Department – 5G L1/L2 Protocol Layer Development
Brunel University, Electronic Engineering Department - L3 Protocol, NFV/SDN and Application Layer Development

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5G Vehicles, John Cosmas, Brunel University & john.cosmas@brunel.ac.uk
• **expected outcomes**
  – Moving wireless backhaul (P2P) optimized for train
    • Backhaul link: mmWave (Giga bps level)
    • Inside vehicle: 5G small cell using 40/60 GHz or VLC
  – **Motivation impacts**
    • Provide ultra-high data rate to users on board train through intra-carriage IoRL

• **Schedule typical project duration 36 month**
  – Year 1: Design
  – Year 2: Implementation
  – Year 3: Demonstration

expected outcome: for trains, planes or cars
Partners

Existing consortium
Viavi Solutions - 5G Physical Layer solution provider
University of Leicester – 5G L1/L2 Protocol Layer Development
Brunel University - NFV/SDN and /Application Layer Development
Fraunhofer – mmWave modules
Runel – Scaleable 5G Layer 1
ISEP – Visible Light modules
Zodiac – Aircraft Systems provider

Involved countries: Uk, France, Germany, Israel,

Expertise, profiles and types of partners you are looking for:
Train/Plane/Car infrastructure integrator
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For more information and for interest to participate please contact:

John Cosmas
john.cosmas@brunel.ac.uk
Tel: 07908 151859
Brunel University

Presentation available via:
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