



eltic-Plus⁺

Smart Connected World



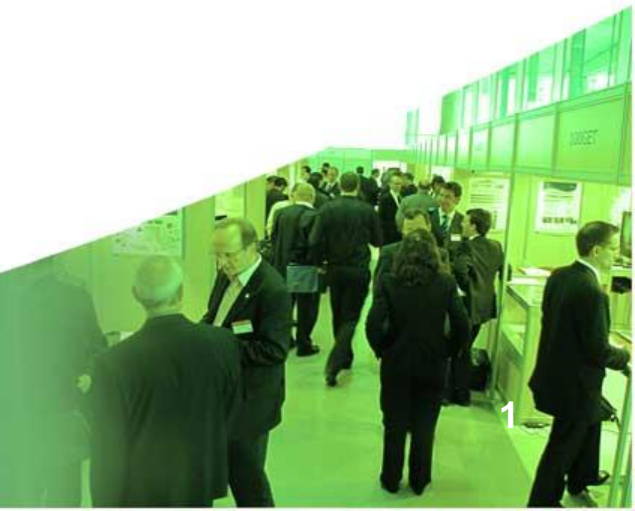
Celtic-Plus Proposers Day
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Traffic Information Broadcasting Systems Based on Visible Light Communication

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• *What is the main benefit of the idea/proposal?*

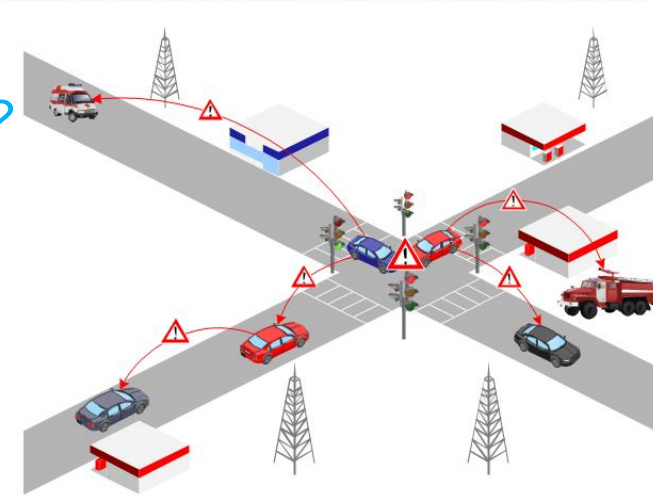
The project will develop a VLC (Visible Light Communication) system capable to operate in severe conditions (dense vehicular traffic conditions, high level of nocturnal and diurnal visible light noise)

• *What makes the added value?*

The proposal aims to advance the technology for vehicle-to/from-infrastructure unicasting, vehicle-to-infrastructure anycasting, infrastructure-to-vehicle broadcasting and vehicle-to-vehicle broadcasting

• *Why should I participate in the project?*

- *Traffic communication*
- *Public data broadcasting*
- *Indoor broadband broadcasting (Hospital / Supermarket / University / Office)*
- *Home access networks*
- *Military communication*



Organisation Profile

Company Name	Beia Consult International SRL
General Manager	George SUCIU Sr. (george.suciu@beia.ro)
Business Field	<ul style="list-style-type: none"> • Trading and distribution of IT & telecommunications equipment • National and EU R&D Projects • Telecommunications, Telemetry & IT turn-key projects
Team	Total of 40 employees: 20 engineers, 13 R&D employees (2 Ph.Ds, 1 Ph.D candidate, 5 senior researchers, and 5 junior researchers), 7 management personnel
Headquarters	12, Poiana Narciselor st., sect.1, Bucharest
Tel / Fax	Tel: +40 21 332 3005 Fax: +40 21 332 3006
Home Page	www.beia.ro , www.beiaro.eu
Certification	ISO 9002/2000; ISO 14001;ISO27000
Established	1991, family owned (George Suciu Sr. Founder, Jr. Co-owner)

Proposal Introduction (1)

Motivation

- *The idea of using as a communication medium the light has started again with the invention of white Light Emitting Diodes, which can be used to send data by flashing light at speeds that are impossible for the human eye to detect.*
- *The light sources existent in people's daily life can now be used not only for providing indoor/outdoor lightning, but also for communication purposes.*
- *A lot of research activities are being done to make the VLC technology available for commercial use in various fields, such as vehicle-to-road communication using traffic light and Internet access.*

Objectives:

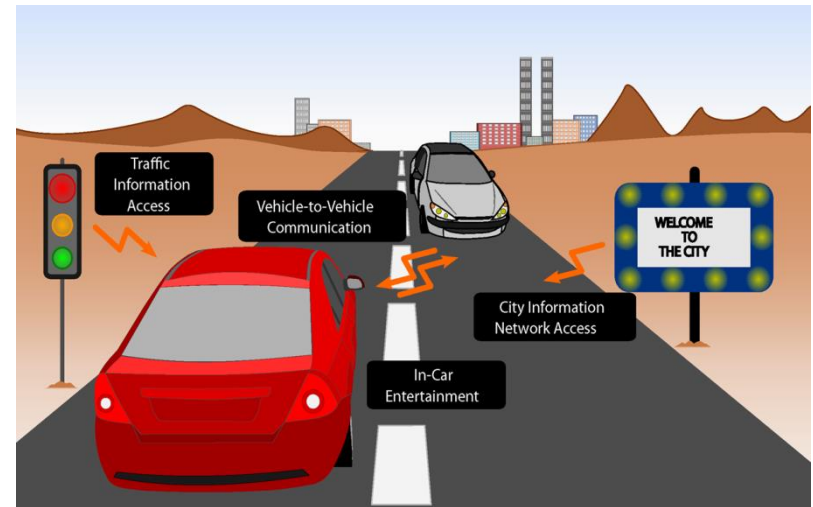
- *The development of a visible light communication system capable to share information from the traffic centre to the vehicles on roads, from vehicle-to-vehicle and vice versa.*
- *To evaluate the ability of visible light communication systems to provide the necessary network services to satisfy the vehicular applications requirements.*

Expected outcome

- Visible Light Communication system for broadcasting important traffic information to V2V (vehicle-to-vehicle) and V2I (vehicle-to-infrastructure) communication facilities

Impacts

- Low-cost electronics
- No health concerns
- No interference with RF systems
- Integration of existing systems



Partners

Partners involved

- *BEIA Consult International / SME / Romania / Development, integration and proof-of-concept prototyping work*
- *UPB (University Politehnica of Bucharest) / UNI / Romania / Development and research of models and techniques for communication components*

Missing partners / expertise

- *Infrastructure-to-vehicle and vehicle-to-vehicle broadcasting expertise / Design and development of medium access protocols for VLC*
- *VLC transmitters and receivers expertise / Design and development of advanced VLC components*

Contact Info

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