



Technology transfer at the Joint Research Centre of the European Commission

Cluj Innovation Days

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DG JRC

Technology Transfer and Intellectual property unit

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Content

I. The role of the JRC

II. Danube Innovation Partnership

III. Case study. Sesamonet

- **Technology**
- **Licensing. Beneficiaries**
- **Challenges ahead**

I. Joint Research Centre

- *The European Commission's in-house science service, provides EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle*
- *Headquarters in Brussels, with research institutes in Belgium, Germany, Italy, the Netherlands and Spain.*

I. Joint Research Centre

- *Key policy areas of the JRC include:*
 - **environment and climate change;**
 - **energy and transport;**
 - **agriculture and food security;**
 - **health and consumer protection;**
 - **information society and digital agenda;**
 - **safety and security, including nuclear**

I. Joint Research Centre

- *Collaborates with the EU Member States, the scientific community and international partners.*
- *Collaborations with scientific entities are formalised through collaboration agreements (CA) regulating amongst others: use of the results of the CA or confidentiality obligations.*

I. Joint Research Centre. Intellectual property & Technology transfer unit:

Manages the procedures for procuring new IP assets, and for licensing or assigning EU-owned IP assets.

- **Examples of EU-owned assets: text, videos, images, software, databases, trademarks, patents.**

I. Joint Research Centre. Intellectual property & Technology transfer unit:

Procedures for licensing an EU owned IP asset:

- **understanding the purposes of the licence;**
- **negotiations on the legal rights to be granted to the Licensee. Draft Licence Agreement/Evaluation Agreements/Option Agreements;**
- **Commission Decision authorising the entry into force of the Licence.**

II. JRC's scientific support to the EU Strategy for the Danube Region (EUSDR)

The Danube Innovation Partnership:

Aims to enhance and accelerate technology transfer in the Region.

II. JRC's scientific support to the EU Strategy for the Danube Region (EUSDR)

Challenges in the Region

- **Disparities among countries**
- **Lack of innovation culture**
- **Human Resources Constraints**
- **Financial Constraints**

Challenges of the Institutions

- **Lack of Funds**
- **Need of business-minded institutions and researchers**

II. The Danube Innovation Partnership

**Relies on experienced international organisations
(e.g. TTO Circle, EIF, OECD, LERU, WIPO)**

**Holistic strategy: actions at the education, research,
technology transfer, early stage and growth
financing level**

**Involvement of actors at all governance levels
(regional, national, European and global)**

II. JRC's scientific support to the EU Strategy for the Danube Region (EUSDR)

TRAINING

- ✓ TT Summer Schools: Sep 2014 Belgrade, Sep 2015 Budapest (tbc)

FUNDING

- ✓ Funding guidelines

OPEN DIALOGUE

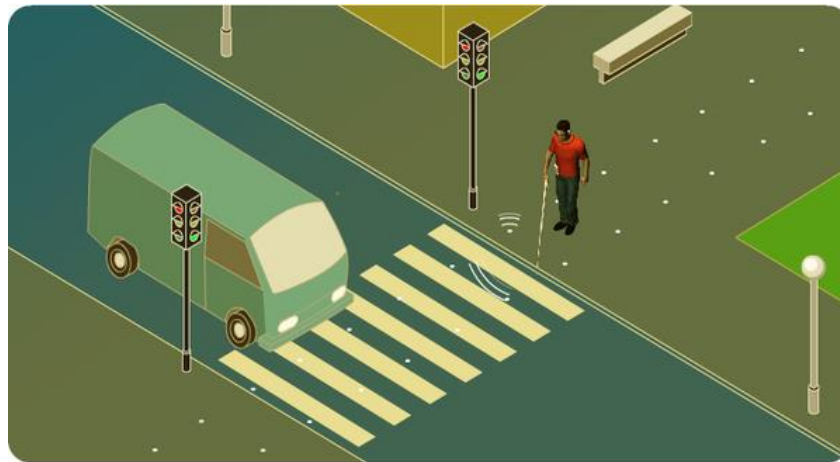
- ✓ Open communication with authorities

III. Joint Research Centre. Case study on technology transfer. Sesamonet

The Secure and Safe Mobility Network (Sesamonet) was developed and is owned by the JRC.

- **The technology was developed following a JRC Innovation Project Competition;**
- **Consists of a navigation system for blind and visually impaired persons, based on the use of Radio Frequency Identification technology (RFID).**

III. Joint Research Centre. Case study on technology transfer. Sesamonet



- Gives guidance and help providing audio messages via an earplug concerning the surrounding environment and potential situations of danger.

III. Joint Research Centre. Case study on technology transfer. Sesamonet

The Secure and Safe Mobility Network (Sesamonet) was developed and is owned by the JRC.

Novelty?

- **RFID microchips are recycled from the electronic tracking of animals.**
- **Can be used indoors and outdoors**

Joint Research Centre. Case study on technology transfer. Sesamonet

Sesamonet Components:

- ***Transponder (RFID - Radio Frequency Identification chip)***
- ***Sesamonet electronic walking stick***
- ***Sesamonet software***
- ***Earphone or headphone***

Joint Research Centre. Case study on technology transfer. Sesamonet

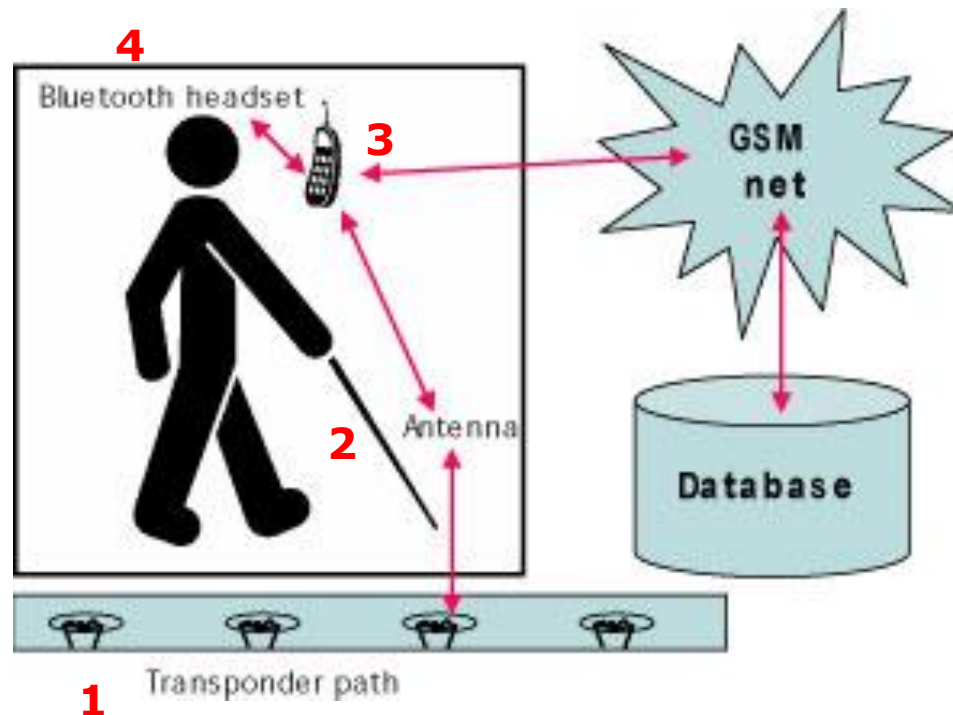
Transponders - the walking stick



Joint Research Centre. Case study on technology transfer. Sesamonet

User components:

walking cane, earphone, smart phone/PDA



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- Radio Frequency Identification (RFID) transponders installed in the ground along a pedestrian path.



New intelligent path for the visually impaired in Melsungen, Germany
© EU, 2014

- When moved along the path, an electronic *walking stick* activates and reads the identity of each transponder.

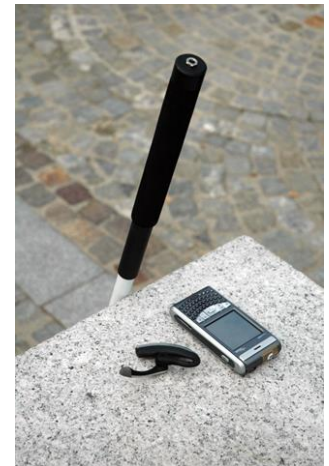
Joint Research Centre. Case study on technology transfer. Sesamonet

- The walking stick has an embedded antenna which reads the RFID transponders.
- Transponders send signals via the antenna to a PDA/mobile phone equipped with a database with information on the location.

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Advantages:

- **Compatible with other systems (eg. allows for integration with GPS navigation)**
- **Flexible: allows for user customization, addition of services (eg. activation of information on traffic lights, emergency calls)**





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Demonstration path at the JRC, in Ispra:

<https://www.youtube.com/watch?v=Sc4zO8JJcdk>



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Intellectual property protection in Sesamonet:

***Patent* – prototype of the navigation system**

***Copyright* - Software**

***Trademark* – Sesamonet**

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Technology transfer of Sesamonet:

Evaluation Agreements

Option Agreements

Licence Agreements

- To the Italian Blind Union (Unione Italiana Ciechi) for exploitation of Sesaonet
- To the kMG Solutions spin off created by the European Commission

Joint Research Centre. Case study on technology transfer. Sesamonet

The spin-off company, kMG Solutions' role:

- **further develop Sesamonet by improving it and making it compatible with other technologies;**
- **use, offer and sell the technology of Sesamonet.**

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*Existing Sesamonet paths and collaborations
include:*

- **The first prototype of the SESAMONET path was installed in 2007 in Laveno, Italy**

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Existing Sesamonet paths and collaborations include:

- **In Parco Prealpi Giulie, Udine, Italy**
- **National Centre for Services and Research on prevention of blindness and rehabilitation of patients affected by low-vision, Gemelli Hospital in Rome, Italy**
- **University of Calabria, Italy**
- **Kassel Calden airport, Germany**
- **Melsungen, Germany**

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- **Kassel Calden airport, Germany, 11 September 2013**





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Results and challenges of Sesamonet were indicated in the **users survey and study** commissioned by the JRC to the ZIV-Zentrum für integrierte Verkehrssysteme in Germany in 2013.

Joint Research Centre. Case study on technology transfer. Sesamonet

Survey and study by ZIV-Zentrum für integrierte Verkehrssysteme in Germany on Sesamonet. 438 responses.

Results and challenges:

- **High interest from the impaired persons**
- **Difficult market situation**
- **Low usage of canes**
- **Increasing smartphone usage (30%)**



Questions ?

Thank you!

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