

Snapshot spEctral imagEr for cost effective IR Surveillance

Fact Sheet

Project Information

SEERS

Grant agreement ID: 645114

[Project website](#) 

Start date

1 February 2015

End date

31 January 2018

Funded under

H2020-EU.2.1.1.6.

Overall budget

€ 3 750 535

EU contribution

€ 3 750 535

Coordinated by

ASOCIACION DE
INVESTIGACION METALURGICA
DEL NOROESTE



Spain

Objective

SEERS proposes a breakthrough approach to multispectral imaging in a broad band of the infrared domain (0.7-14 μm wavelength). Video surveillance for safety and security is targeted for demonstration.

Firstly, a snapshot multispectral imager in the IR domain will be developed. Secondly, an embedded approach will be adopted for image reconstruction, cognitive image fusion, video pre-processing and event-driven operation. Thirdly, the benefits of a novel video analytics solution (VAS) for smart networked operation will be demonstrated in terms of performance and persistence, thanks to multispectral imaging.

As a result of SEERS, a compact and cost-effective IR imager will be delivered. With this aim, research and development at different levels will be addressed:

- Microbolometer (FPA) re-design adapted to multi-aperture imaging requirements

- Spectral optical design putting together beam splitting and multi-aperture imaging
 - Development of multi-aperture sensor arrays for multispectral and super-resolution imaging
 - Embedded processing for: image reconstruction based on computational imaging, cognitive image fusion, spectral measurements, and video pre-processing
 - Persistent video analytics based on pre-processed multispectral video
- Overall, SEERS approach will enable robust intelligent surveillance with event-driven and smart performance. Remarkable capabilities will be robustness to variable visibility conditions (e.g. fog, rain, fumes), gas discrimination and level determination, spill detection, fire and burst imaging with accurate temperature measurement. Demonstration will be addressed in real operational conditions for two different scenarios: coastal and tunnel surveillance.

Field of science

/social sciences/sociology/social problems/ageism

/engineering and technology/environmental engineering/energy and fuels/fossil energy/gas

Programme(s)

Topic(s)

Call for proposal

H2020-ICT-2014-1

Funding Scheme

RIA - Research and Innovation action

Coordinator



ASOCIACION DE INVESTIGACION METALURGICA DEL NOROESTE

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Activity type

Research Organisations

EU contribution

€ 535 250

[Contact the organisation](#) 

Participants (8)



NEW INFRARED TECHNOLOGIES SL

 Spain

EU contribution

€ 203 500

Address

Plaza Marques De Salamanca
2
28006 Madrid


Activity type

Private for-profit entities
(excluding Higher or
Secondary Education
Establishments)

[Contact the organisation](#) 



MIKROSENS ELEKTRONIK SANAYI VE TICARET AS

 Turkey

EU contribution

€ 513 875

Address

Odtu Teknokent Odtu-met
Alani A1 Blok/4 Bolum Ofis 5
Eskisehir Yolu 9 Km
06531 Ankara

Activity type

Private for-profit entities
(excluding Higher or
Secondary Education
Establishments)

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QUEST PHOTONIC DEVICES BV

 Netherlands

EU contribution

€ 743 250

Address

Industrieweg 41
1775 PW Middenmeer

Activity type

Private for-profit entities
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Secondary Education
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UNIVERSITY OF GLASGOW

 United Kingdom

EU contribution

€ 344 631

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Activity type

**Higher or Secondary
Education Establishments**

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FUNDACION CENTRO TECNOLOGICO DE TELECOMUNICACIONES DE GALICIA

 Spain

EU contribution

€ 385 750

Address

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Activity type

Research Organisations

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THALES ITALIA SPA

 Italy

EU contribution

€ 550 416

Address

**Via Provinciale Lucchese 33
50019 Sesto Fiorentino**

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Activity type

**Private for-profit entities
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Secondary Education
Establishments)**

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AIRBUS DS SAS

 France

EU contribution

€ 254 613

Address

**Boulevard Jean Moulin - Zac
De La Clef Saint Pierre 1
78990 Elancourt**

[Website](#) 

Activity type

**Private for-profit entities
(excluding Higher or
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MIDDLE EAST TECHNICAL UNIVERSITY

 Turkey

EU contribution

€ 219 250

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Activity type

**Higher or Secondary
Education Establishments**

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