

Capacitive Identification Tokens

Fact Sheet

Project Information

CAPID

Grant agreement ID: 732389

[Project website](#) 

DOI

[10.3030/732389](https://doi.org/10.3030/732389) 

Project closed

EC signature date

7 November 2016

Start date

1 January 2017

End date

31 December 2019

Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Total cost

€ 3 474 318,75

EU contribution

€ 3 474 318,70

Coordinated by

CARTAMUNDI TURNHOUT



Belgium

Objective

Almost every person in Europe now has access to a connected touch device and the creation of new capacitive sensing devices has become easy and cost effective. Building on this, the CAPID project wants to develop 'c-tokens', that interact with these touchscreen and capacitive readers. C-tokens are thin and flexible, metal-oxide tags, integrated in paper and plastic products. The tags will send a dynamic capacitive signal into the reading devices.

C-tokens make it possible to identify and locate low cost and high volume products, like cards or labels, to the internet, just by putting them on a touchscreen. The number of different ID's is very high and make it possible to create unique codes per

product. The very small footprint (much smaller than NFC or QR) and low thickness make it possible to integrate them in a product as thin and flexible as a playing card. They are more secure than QR (can be copied) or NFC (can be read from distance) and they can detect the exact position of an object (important for board game applications).

The tags will harvest the necessary energy from the capacitive screen, through capacitive coupling or photovoltaic technology. The high end c-token can communicate with the touchscreens bi-directionally, making use of photo sensors inside the cards.

Objective 1 is the development of the different components, like the flexible thin-film IC's in metal oxide technology and printed electrode arrays as well as the integration of photovoltaic and photosensors.

Objective 2 is the implementation of scalable manufacturing processes for assembly and integration of all the components into finished products.

Objective 3 is the realization of application demonstrators, one for each of the 3 end-users in the consortium. A first application is an interactive board game (Cartamundi Digital), a second application focuses on a more secure ticket system for events (ICS Festival Services) and the third one is providing a new way of mobile payments through touch

Fields of science (EuroSciVoc)

[engineering and technology](#) > [mechanical engineering](#) > **[manufacturing engineering](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [information engineering](#) > [telecommunications](#) > [radio technology](#) > **[radio frequency](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [electronic engineering](#) > **[sensors](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [information engineering](#) > [telecommunications](#) > **[mobile phones](#)**

[engineering and technology](#) > [materials engineering](#) > **[woodworking](#)**



Programme(s)

[H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies \(ICT\)](#)

MAIN PROGRAMME

Topic(s)

Call for proposal

[H2020-ICT-2016-2017](#)

[See other projects for this call](#)

Sub call

H2020-ICT-2016-1

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



CARTAMUNDI TURNHOUT

Net EU contribution

€ 985 482,50

Total cost

€ 985 482,50

Address

VISBEEKSTRAAT 22

2300 Turnhout

 **Belgium** 

Region

Vlaams Gewest > Prov. Antwerpen > Arr. Turnhout

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (6)



INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM

 Belgium

Net EU contribution

€ 749 498,75

Address

KAPELDREEF 75

3001 Leuven 

Region

Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Leuven

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 749 498,75



CARTAMUNDI DIGITAL

 Belgium

Net EU contribution

€ 565 373,70

Address

DEINSESTEENWEG 108 BUS B

9031 GENT 

Region

Vlaams Gewest > Prov. Oost-Vlaanderen > Arr. Gent

Activity type

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

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 565 373,75



NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO

 Netherlands

Net EU contribution

€ 700 213,75

Address

ANNA VAN BUERENPLEIN 1
2595 DA Den Haag 

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 700 213,75



ICS FESTIVAL SERVICE GMBH 

 Germany

Net EU contribution

€ 0,00

Address

SCHENEFELDER STR. 17
25596 WACKEN 

Region

Schleswig-Holstein > Schleswig-Holstein > Steinburg

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



REBASED SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA

 Poland

Net EU contribution

€ 240 000,00

Address

**UL. JANA KASPROWICZA NR 30
01 871 WARSZAWA** 

Region

Makroregion województwo mazowieckie > Warszawski stołeczny > Miasto Warszawa

Activity type

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

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 240 000,00



SIMPLY-X GMBH

 Germany

Net EU contribution

€ 233 750,00

Address

**LIEGNITZER STR 2
37581 BAD GANDERSHEIM** 

SME 

Yes

Region

Niedersachsen > Braunschweig > Northeim

Activity type

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

Links

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[HORIZON collaboration network](#) 

Total cost

€ 233 750,00

Last update: 3 September 2022

Permalink: <https://cordis.europa.eu/project/id/732389>

European Union, 2025