

# Erasmus Without Papers

identity and data exchange challenges

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Central ICT Services  
University of Málaga

TERENA TF-EMC<sup>2</sup>  
Outreach Activity

Chair person of the Groningen Declaration  
Executive Committee

EWP  
Gent  
June 25th, 2013



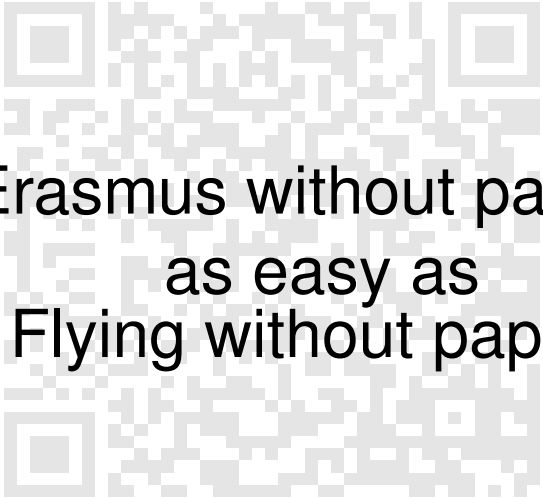
CoE/DIC Programme Partner



RSG<sup>3</sup>



# Erasmus without papers



Erasmus without papers  
as easy as  
Flying without papers

AG15:15

IB8456,03FEB,N,18C,007

Ocultar herramientas ▾

[Alertas](#)  
[Gráfica de tarifas](#)  
[Matriz de aerolíneas](#)

**Escalas**

directo  
 2+ escalas 1233 €

**Horarios**  
**Saliendo Málaga**  
 lun 0:30 - 15:30

**Saliendo Poznan**  
 vie 5:30 - 21:00


[Mostrar horarios de aterrizaje](#)

**Clase**

Turista 1233 €  
 Negocios 2473 €  
 Mix 1665 €

33 de 195 vuelos [Ver todos](#) Ordenar **Precio - Menor a mayor** ▾

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**1233 €**  **Varias aerolíneas**

AGP	14:00 ▶	POZ	23:50	9h 50m	2 stops (TXL...)
POZ	12:55 ▶	AGP	18:50	5h 55m	1 stop (DUS)

**Elegir** **Airline-direct** 1233 € Turista !

[Detalles](#) [Tarifas](#)

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**1665 €**  **Varias aerolíneas / Lufthansa**

AGP	15:20 ▶	POZ	23:50	8h 30m	2 stops (BRU...)
POZ	5:55 ▶	AGP	12:25	6h 30m	1 stop (MUC)

**Elegir** **lastminute.co...1665 €** Mixta !

[Detalles](#) [Tarifas](#)

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**1677 €**  **Varias aerolíneas**

AGP	10:25 ▶	POZ	23:00	12h 35m	2 stops (VIE...)
POZ	12:55 ▶	AGP	18:50	5h 55m	1 stop (DUS)

**Elegir** **Budgetair** 1677 € Mixta ☺

[Detalles](#) [Tarifas](#)

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**1691 €**  **Varias aerolíneas / Lufthansa**

AGP	10:45 ▶	POZ	23:00	12h 15m	2 stops (LIS...)
POZ	5:55 ▶	AGP	12:25	6h 30m	1 stop (MUC)

<http://es.bestfares.amadeus.net/>

## Escalas

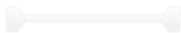
- directo
- 2+ escalas 1233 €

## Horarios

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lun 0:30 - 15:30



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vie 5:30 - 21:00



Mostrar horarios de aterrizaje

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- Mix 1665 €

1233 €



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Elegir

Airline-direct 1233 €

Turista ⓘ

Detalles

Tarifas

1665 €

Varias aerolíneas /  
Lufthansa

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Elegir

lastminute.co.

Mixta ⓘ

Detalles

Tarifas

1677 €



Varias aerolíneas

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Elegir

Budgetair 1677 €

Mixta ⓘ

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MLO

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Mostrar horarios de aterrizaje

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Airline-direct 1233 €

Turista ⓘ

Detalles

Tarifas

1665 €

Varias aerolíneas /  
Lufthansa

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Elegir

Iaetm

Mixta ⓘ

Detalles

Tarifas

# ELMO?

1677 €



Varias aerolíneas

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Elegir

Budgetair 1677 €

Mixta ⓘ

Detalles

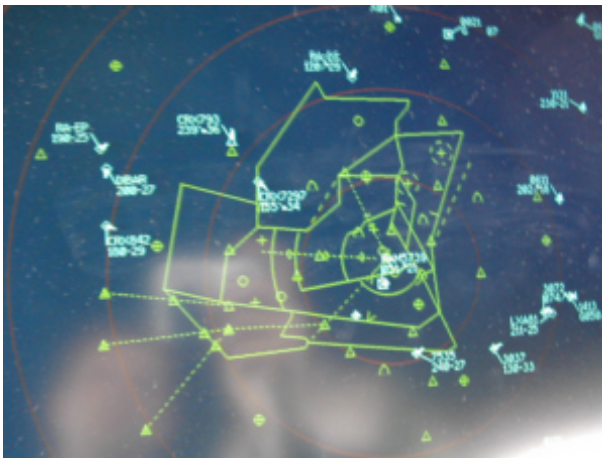
Tarifas

1691 €

Varias aerolíneas /  
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[http://commons.wikimedia.org/wiki/File:ATC\\_approach\\_radar\\_screen.jpg](http://commons.wikimedia.org/wiki/File:ATC_approach_radar_screen.jpg)





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<b>Cairns</b>	<b>£903*</b> return

\*Prices in GBP from...

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Return

One Way

From: London (Heathrow)

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From London (Heathrow)<sup>+</sup> ▾

Perth

£765'  
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Sydney

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Cairns

£903'

See the best

Australian

# Application forms Learning agreements Change forms

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You can check-in and select your seats from 24 hours up until 2 hours before your flight departure at [qantas.com](http://qantas.com).\*



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<http://www.qantas.com.au/travel/airlines/international-online-checkin/global/en>



# Course registration

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2. Click on the 'Online Check-in' button then follow 5 easy steps:



Select  
Passenger



Select Flight



Review /  
change Seats



Declare any  
Dangerous  
Goods



Print  
Boarding Pass



[http://commons.wikimedia.org/wiki/File:SR\\_DC3.jpg](http://commons.wikimedia.org/wiki/File:SR_DC3.jpg)



# Really taking the course



[http://commons.wikimedia.org/wiki/File:Malaga\\_aeropuerto.jpg](http://commons.wikimedia.org/wiki/File:Malaga_aeropuerto.jpg)



The background image shows the exterior of the Málaga Airport terminal building. The building is a long, light-colored structure with a series of arched doorways. The words "AEROPUERTO DE MÁLAGA" are visible in large, raised letters on the facade. In the foreground, several cars are parked, including a red car, a white car, and a blue van. A few people are standing near the cars. The sky is overcast.

# Transcripts Diploma supplement

# Trust Standards

## Behavioral trust

- person to person
- institution to institution
- person to institution
- reputation based
- supported by *feelings*

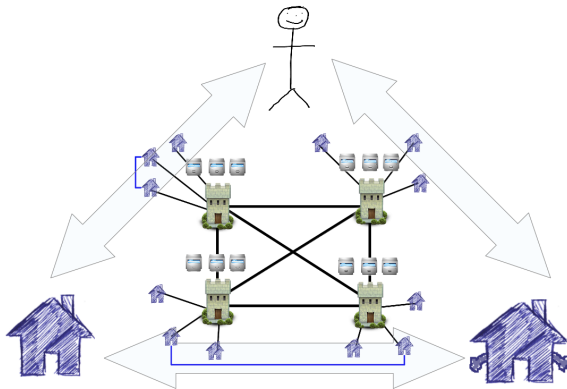
## Technical trust

- institution to institution
- institution to *network*
- system to system
- procedure based
- supported by technology

## The three laws of crypto

- Confidentiality
- Integrity
- Non repudiation

# Trust



# Standards

TCP/IP BGP  
SMTP HTTP IMAP XMPP  
X.509 TLS SAML OAuth OpenID  
SOAP XML ReST JSON  
PDF ODF SCHAC  
MLO ELM ELMO

# Standards



<http://www.eid-stork.eu/>



# Standards



<http://www.edugain.org/>

# Standards



*The future of Digital Student Data  
Portability*

<http://www.groningendeclaration.org/>

# Remember

Remember  
All your documents are  
born digital

Tom Black @stanford.edu

# Trust and Security

X.509

Signing and Encryption

# Identity

SAML

eduGAIN and STORK

## Document format

for humans  $\implies$  signed PDF  
for machines  $\implies$  signed XML/JSON

## Document syntax

personal data	⇒	eduPerson SCHAC
learning oportunities	⇒	ELM + MLO = ELMO
exchange documents	⇒	do we have any?
transcripts	⇒	EGRACONS, others?



## Document exchange

human	→	human	⇒	signed encrypted mail
machine	→	human	⇒	PDF over HTTPS
machine	→	machine	⇒	XML over HTTPS
human	→	machine	⇒	HTML over HTTPS

## Intellectual Property

### The IETF way

protocols → Creative Commons  
reference implementations → Open Source

# Thank you



# Thank you

## Questions?

answers not assured



# Thank you

## Questions?

answers not assured

# Let the fun start

