

# Erasmus Without Papers

from a low level technical view

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President of the Groningen Declaration  
Executive Committee

Central ICT Services  
University of Málaga

ERACON  
Poznań  
May 16th, 2013

GIRALTGARCIA/V



ACP,15:15

IB8456,03FEB,N,18C,007

ISSUED BY <b>TRANS WORLD AIRLINES, INC.</b>			PASSENGER TICKET AND BAGGAGE CHECK			ORIGIN	DESTINATION	AIRLINE	FORM	SERIAL NUMBER	
NAME OF PASSENGER <b>Mrs CARLA CHESI</b>			NOT TRANSFERABLE			CONTINUATION TICKETS		<b>015:4370:513:334</b> <b>TWA</b> <b>ROMA-ITALY</b> <b>172780</b>			
RESTRICTIONS/ENDORSEMENTS			TRADES IN EXCHANGE FOR			DATE OF ISSUE					PASSENGER'S COUPON
1	NOT VALID BEFORE <b>2</b>	3	ORIGINAL ISSUE CARRIER	FORM & SERIAL NO.	PLACE	DATE	AGENTS NUMBER	PASSENGER'S COUPON			
1	NOT VALID AFTER <b>2</b>	3	TICKET DESIGNATION			TWR CODE <b>17 06 Y 2 4 7 3 2</b>			PASSENGER'S COUPON		
X/O <b>NOT GOOD FOR PASSAGE</b>			FARE BASIS	CARRIER	FLIGHT/CLASS	DATE	TIME	STATUS	ALLOW	PASSENGER'S COUPON	
FROM	<b>ROME</b>		<b>TW 800</b>	<b>ATA</b>	<b>15</b>	<b>11:20</b>	<b>OK</b>	<b>LO</b>	PASSENGER'S COUPON		
TO	<b>TELAVIV</b>		<b>TW 891</b>	<b>MAT</b>	<b>3</b>	<b>6:00</b>	<b>OK</b>	<b>LO</b>	PASSENGER'S COUPON		
TO	<b>ROME</b>		<b>VOID</b>								
TO	<b>VOID</b>										
FORM OF PAYMENT			BAGGAGE CHECKED	PCB	UNCK WT.	PCB	UNCK WT.	PCB	UNCK WT.	FORM OF PAYMENT	
TAX			UNCHECKED	WT	WT	WT	WT	WT	FORM OF PAYMENT		
TAX			CPN			TICKET NUMBER			CK		
TOTAL			<b>17</b>								

IT IS UNLAWFUL TO PURCHASE OR RESELL THIS TICKET FROM TO ANY ENTITY OTHER THAN TRANS WORLD AIRLINES OR ITS AUTHORIZED AGENTS

# Flying without papers



Ocultar herramientas ▾

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**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/>



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From: London (Heathrow)

To:

Depart: May 2013 Fri 17

Return: May 2013 Fri 17

Flexible with dates

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### See the best of Australia

From **London (Heathrow)**\*

<b>Perth</b>	<b>£765*</b> return
<b>Sydney</b>	<b>£877*</b> return
<b>Cairns</b>	<b>£903*</b> return

\*Prices in GBP from...

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Membership No.

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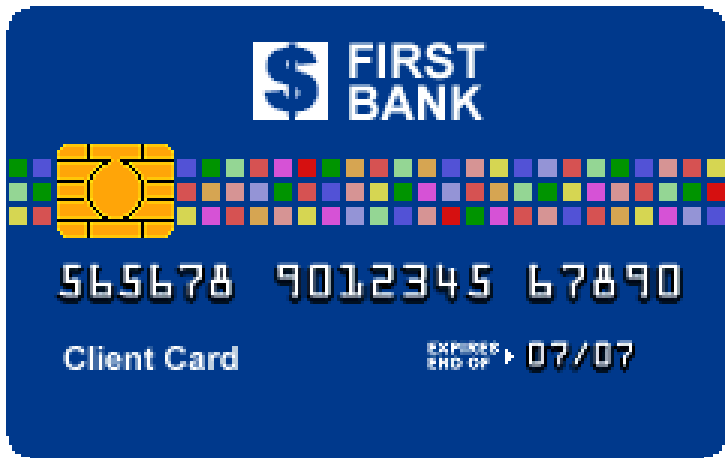
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<http://www.qantas.com.au/travel/airlines/international-online-checkin/global/en>

GIRALTGARCIA/V



ACP,15:15

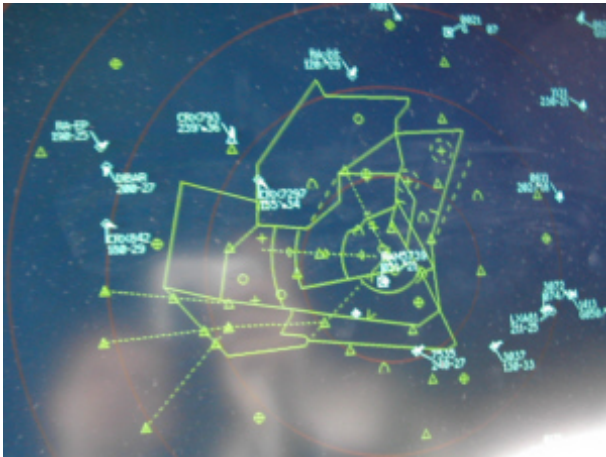
IB8456,03FEB,N,18C,007



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# Standards 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/>

## 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

# Actors



Student

# Actors



Home Institution

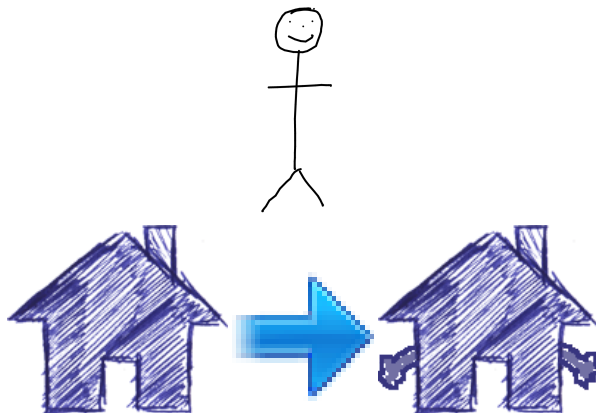


# Actors



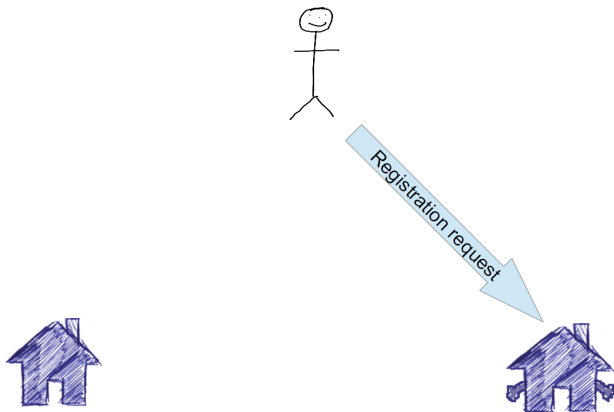
Receiving Institution

# Plot

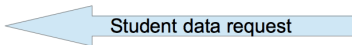


student wants to go from home to receiving institution

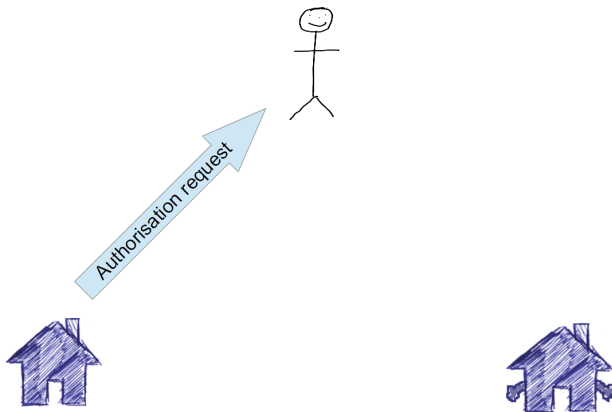
# Plot



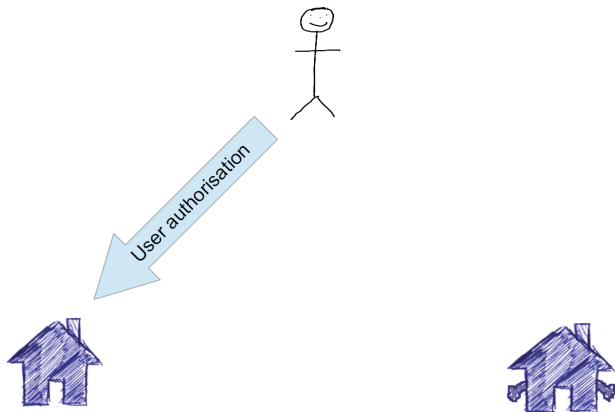
# Plot



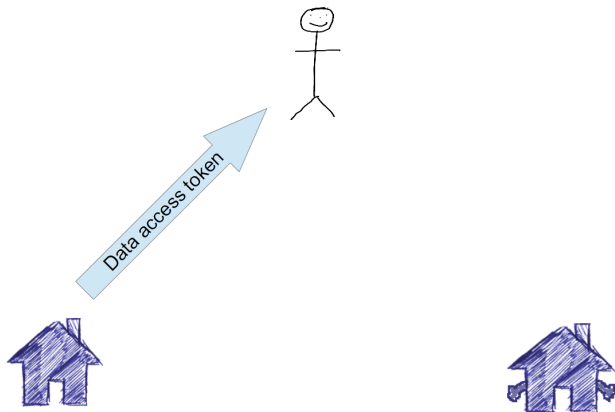
# Plot



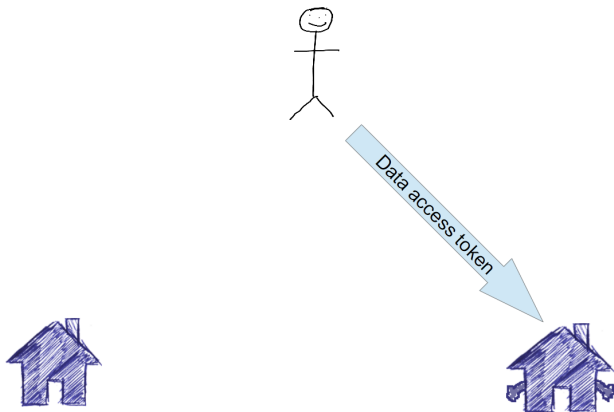
# Plot



# Plot

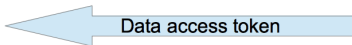


# Plot





# Plot



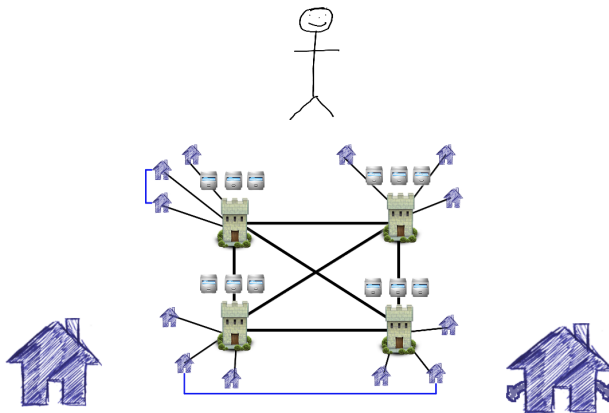
# Plot



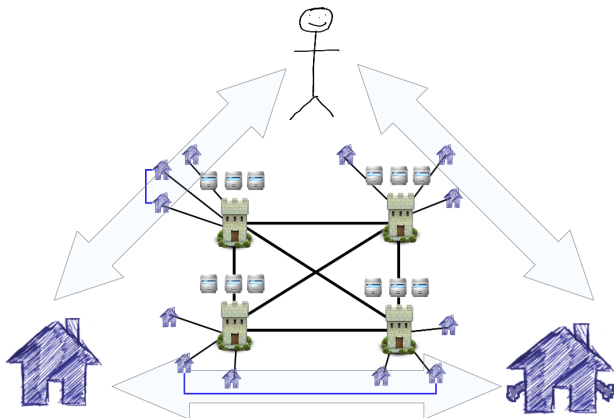
Student data transfer



# Plot



# Plot



# Erasmus without papers

# Erasmus without papers?

# Remember

# Remember

# All your documents are born digital

Tom Black @stanford.edu



# Thank you



# Thank you

## Questions?

answers not assured

