

Device independence within Amadeus

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Agenda

- **Amadeus mission**
- **Device independence today**
- **Device independence tomorrow**

Amadeus Mission – 1/3

Amadeus is a reservation system (CRS):

- ◆ Travel agencies and airlines.
- ◆ Flight, Car, Hotel, Tours ... bookings
- ◆ 200 000 terminals connected worldwide.
- ◆ Travel agents rely on standard desktop computers.



Amadeus Mission 2/3

- **Amadeus is a technology provider:**
 - ◆ **Airlines and airports.**
 - ◆ **Inventory/Check-in applications.**
 - ◆ **Airports and airlines rely on standard desktop computers.**

Amadeus Mission 3/3

- Amadeus is an e-Commerce player
 - ◆ Online distribution.
 - ◆ Airlines, Agencies and Amadeus web sites.
 - ◆ Access from standard desktop.
 - ◆ Access with other devices becomes relevant.

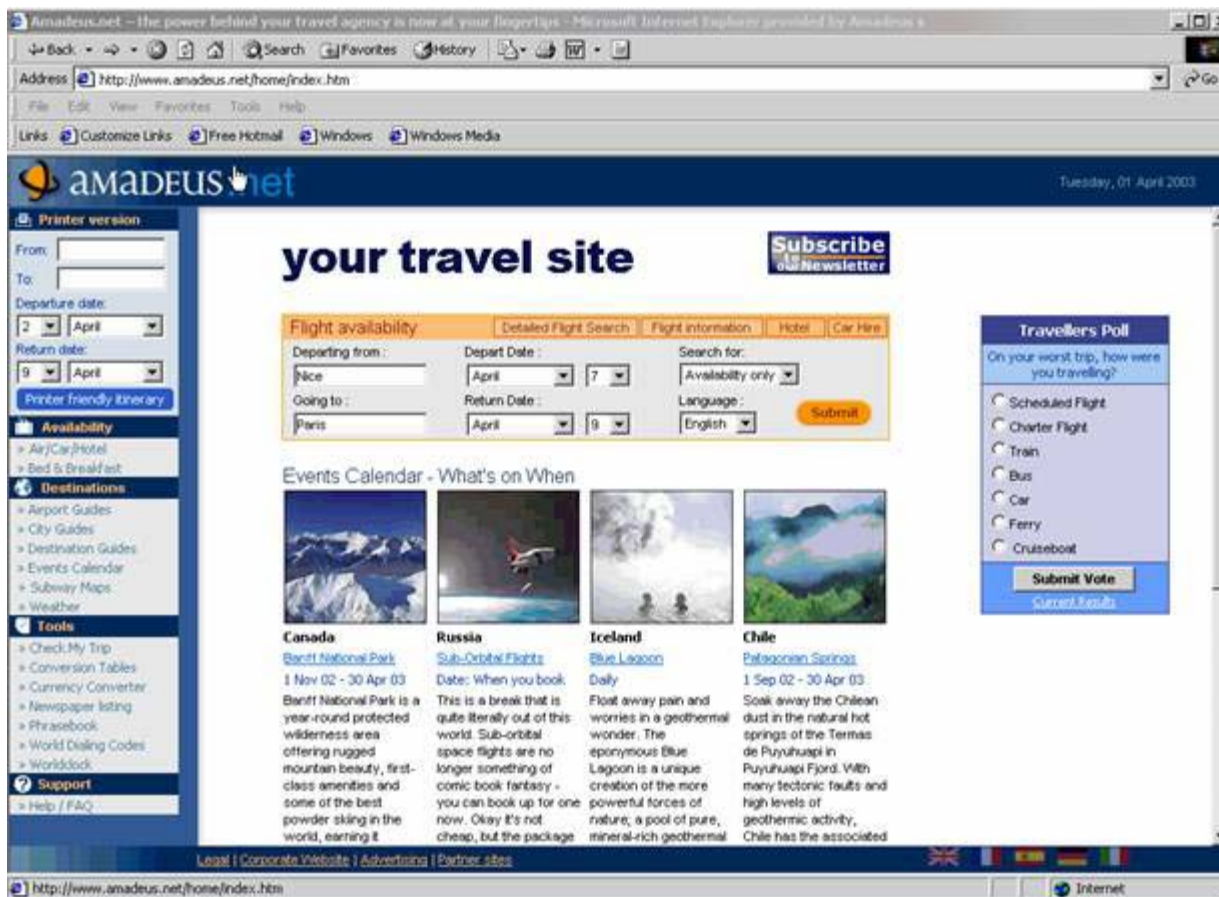


Device Independence Today 1/7

- **Online distribution represents a multi-access devices channel.**
- **Flight information, pricing and trips checking are available on standard devices as well as on WAP devices .**

Device Independence Today 2/7

- Flight/Pricing info on standard interface



Device Independence Today 3/7

- Flight/Pricing info on standard interface

The screenshot shows the Amadeus.net website interface. The search criteria are: From: NICE, To: PARIS, Departure date: 7 April, Return date: 9 April. The search results are for flights from Nice, France to Charles De Gaulle (CDG), Paris, France on Monday, April 7, 2003. The table below lists the flight options.

Flight	Departing	Arriving	Stops - Aircraft	Duration	Seats available
Air France AF 7713	Cote D'Azur (NCE), Nice, France 06:40	Charles De Gaulle (CDG), Paris, France 08:15	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7711	Cote D'Azur (NCE), Nice, France 07:25	Charles De Gaulle (CDG), Paris, France 09:00	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7701	Cote D'Azur (NCE), Nice, France 10:05	Charles De Gaulle (CDG), Paris, France 11:40	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7703	Cote D'Azur (NCE), Nice, France 13:10	Charles De Gaulle (CDG), Paris, France 14:45	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7705	Cote D'Azur (NCE), Nice, France 15:00	Charles De Gaulle (CDG), Paris, France 16:35	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7715	Cote D'Azur (NCE), Nice, France 16:25	Charles De Gaulle (CDG), Paris, France 18:00	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7707	Cote D'Azur (NCE), Nice, France 18:00	Charles De Gaulle (CDG), Paris, France 19:35	Non-stop 320	1h35min	N/A Yes Yes
Air France AF 7709	Cote D'Azur (NCE), Nice, France 20:55	Charles De Gaulle (CDG), Paris, France 22:30	Non-stop 320	1h35min	N/A Yes Yes

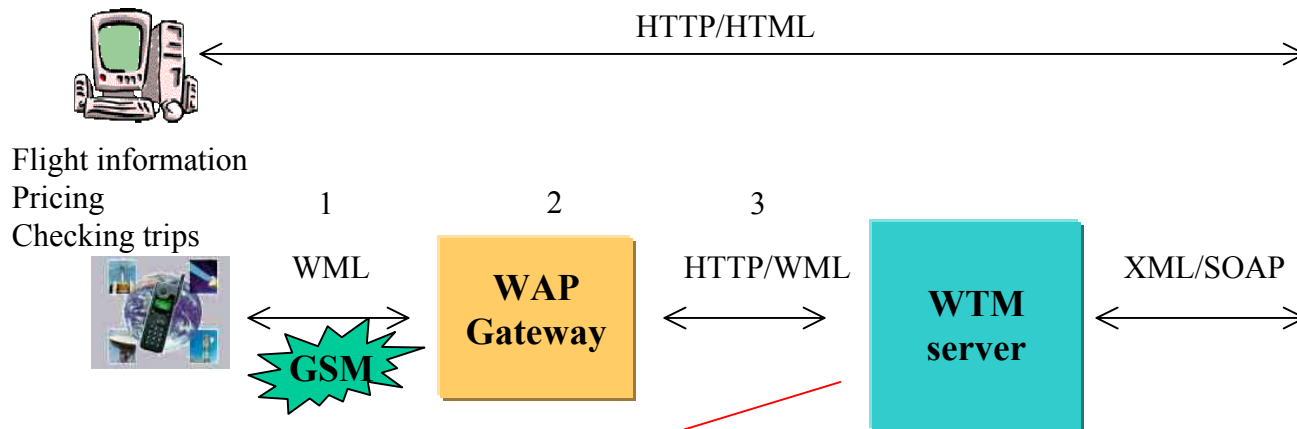
Device Independence Today 4/7

- Flight info on WAP interface



Device Independence Today 5/7

● Technical architecture



- 1 - Incoming request is emitted by the WAP device over GSM network.
- 2 - WAP gateway forwards the request to the WTM (Wireless Travel Management) server over HTTP protocol.
- 3 - WTM server processes the request thanks to interrogating eTravel PlanitGo server. The output is generated as an WML page and sent to the WAP gateway.

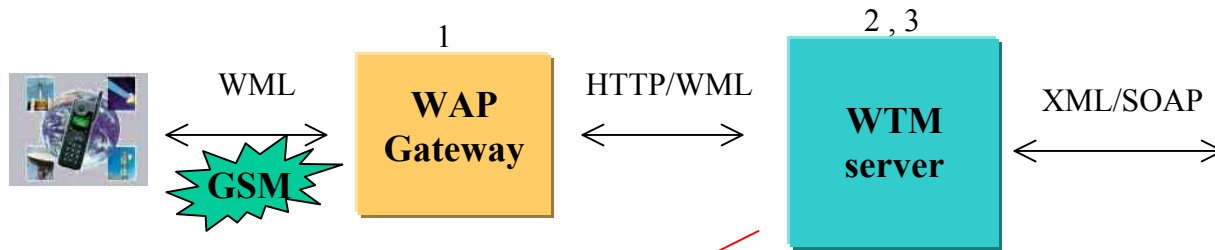
Device Independence Today 6/7

- **Adapting the content layout to the specificities of each phone**



Device Independence Today 7/7

- **Adapting the content layout to the phone specificities**



Flight information
Pricing
Checking trips

- 1 – The type of device is provided to the WTM server by the WAP gateway thanks to using the "User-Agent" HTTP header.
- 2 – WTM server maintains a repository containing a set of XSL style sheets adapted to each device specificities.
- 3 – WTM server selects the proper XSL style sheet depending on the device and apply it on the content received by eTravel PlanitGo server to generate the WML page.



Device Independence Tomorrow 1/6

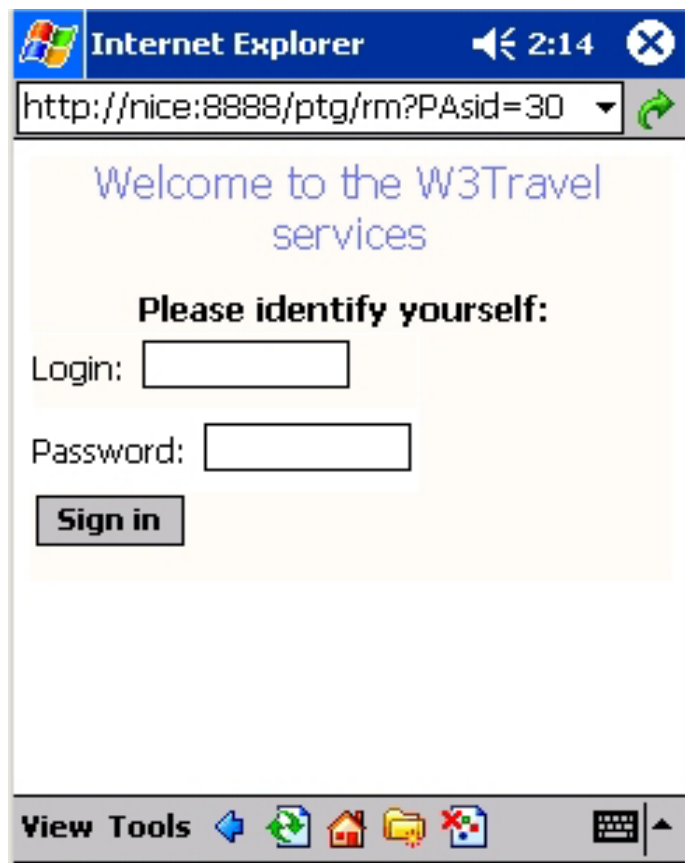
- **Services under prototyping**
 - ◆ **Virtual check-in in airports**
 - ◆ **Geo-location based reservation**

Device Independence Tomorrow 2/6

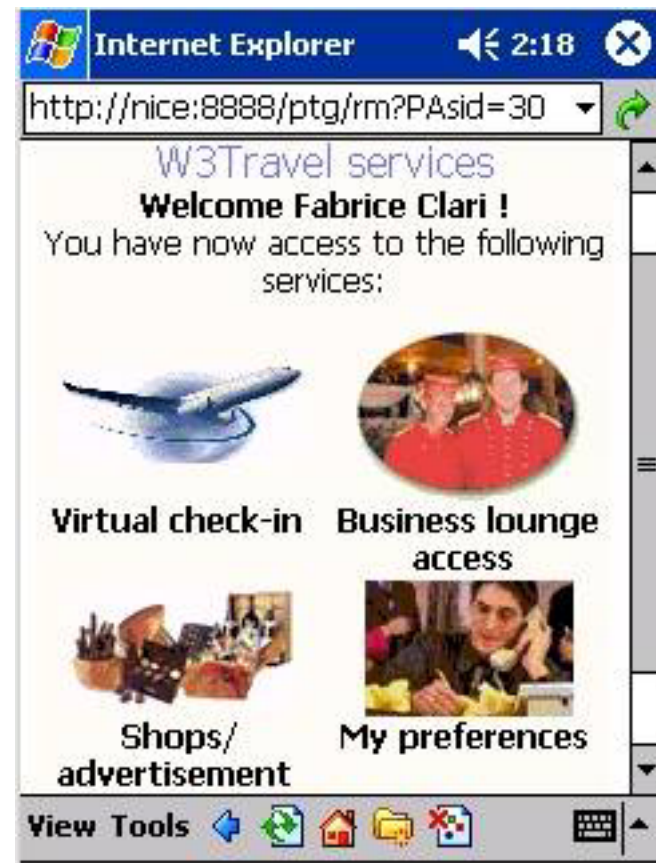
- **Virtual check-in services in airports:**
 - ◆ **Accessible from WAP and PDA devices.**
 - ◆ **Addressed to end-consumers.**
 - ◆ **Developed in partnership with MBDS.**
 - ◆ **Presented in Nice airport during the GSM congress in February 2003.**
 - ◆ **Should be extended to tablet PC for mobile airline agents (first class or lounge check in).**

Device Independence Tomorrow 3/6

- Authentication (1)



- Access to portal (2)



Device Independence Tomorrow 4/6

- Check-in (3)

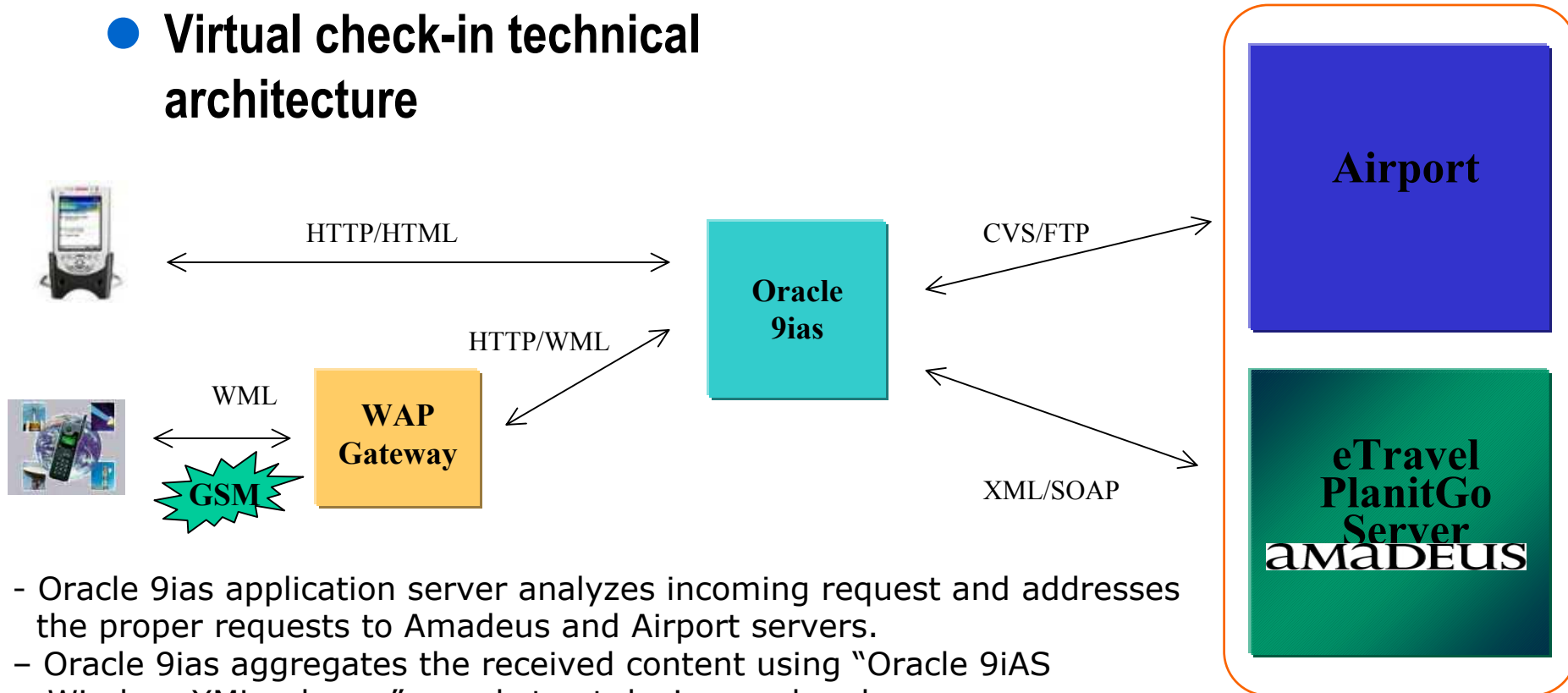


- Confirmation (4)



Device Independence Tomorrow 5/6

- **Virtual check-in technical architecture**



- 1 - Oracle 9ias application server analyzes incoming request and addresses the proper requests to Amadeus and Airport servers.
- 2 - Oracle 9ias aggregates the received content using "Oracle 9iAS Wireless XML schema", an abstract device markup language.
- 3 - Oracle 9ias generates the proper output (WML, HTML...) that is fully adapted to the device specificities. This operation is performed with XSL style sheets.

Device Independence Tomorrow 6/6

- **Geo-location based reservation services**
 - ◆ **Accessible from PDA device**
 - ◆ **Addressed to end-consumers**
 - ◆ **Developed in partnership with MBDS, Opteway, Intel, Oracle and Navlink.**
 - ◆ **Presented in GSM congress in February 2002**

W3T - Travel Assistant

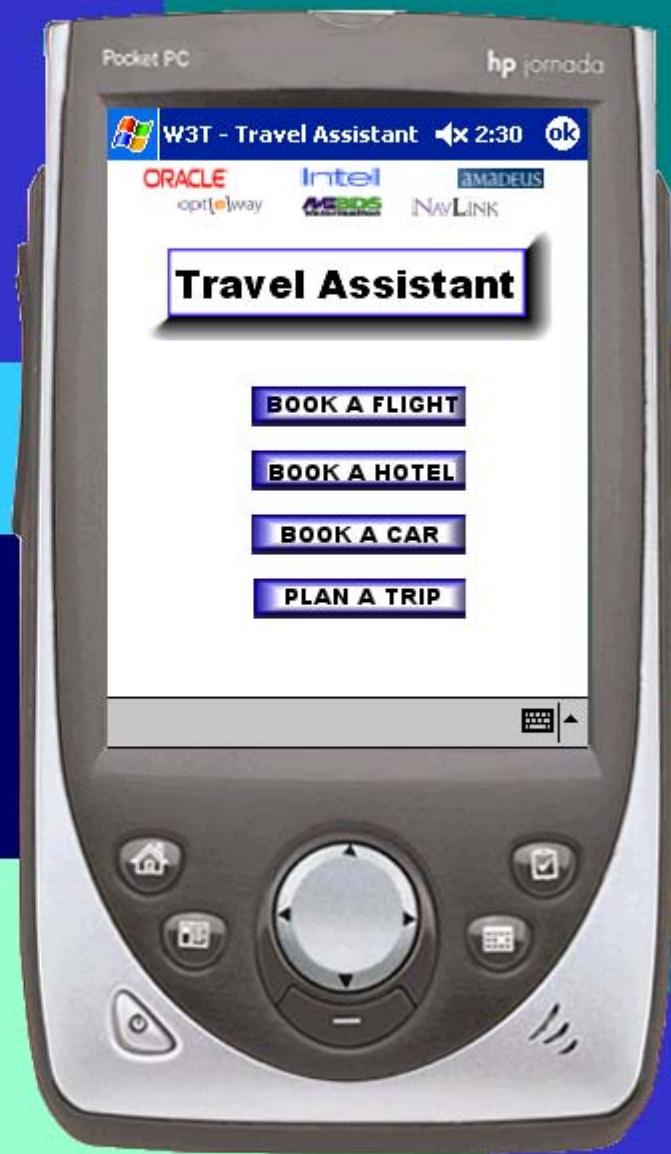


amadeus.net

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Device Independence

- **Thank you**