

SITA | Lab

NFC and Travel

FTE SEP 9, 2012

Renaud Irminger

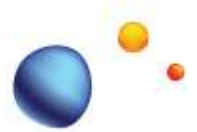
Director SITA Lab



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Create success. Together

SITA IS OWNED AND DRIVEN BY THE AIR TRANSPORT INDUSTRY



SITA's Board includes directors from the following member companies:



AIRFRANCE 



SITA



SITA | Lab

Joint Innovation Program

SITA

Air Travel
Specialist



orange™

Mobility in life



Audience Survey



SHOW ME
YOUR
Wallet!



Movie Time : <http://www.paywithisis.com/>



What is Isis™? What cards can I use? Why it's secure How to get it

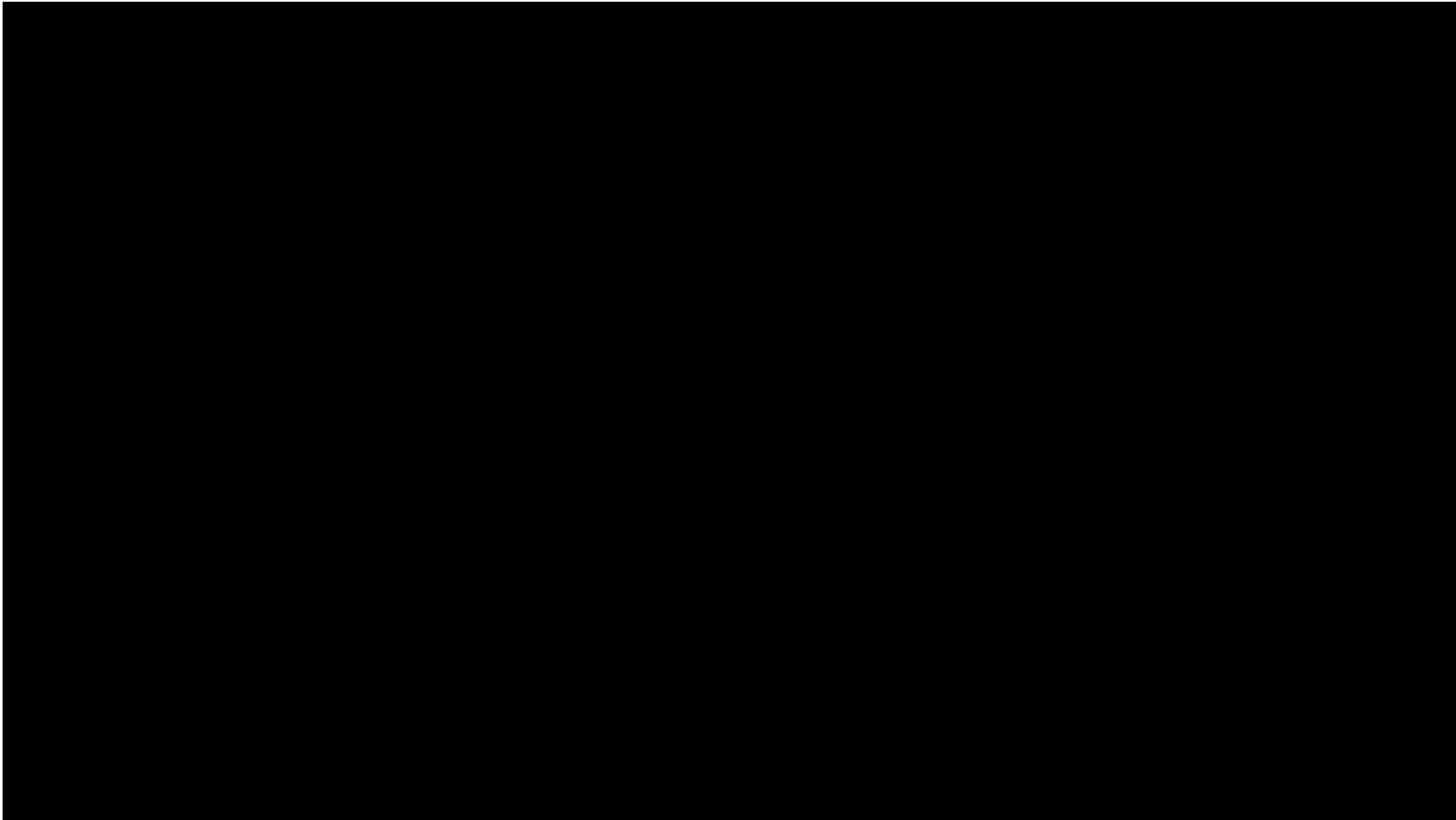


EVERYTHING IN YOUR WALLET, NOW ON YOUR PHONE.

The Isis™ Mobile Wallet. Transforming the way you shop, pay and save.
Submit payment, offers and loyalty membership information all in one SmartTap™.

SEE ISIS IN ACTION 





Near Field Communications

A new ecosystem designed to achieve the 7th mobile revolution



The value of mobile services for subscribers



Listen & talk

See

Touch

NFC

Appstores

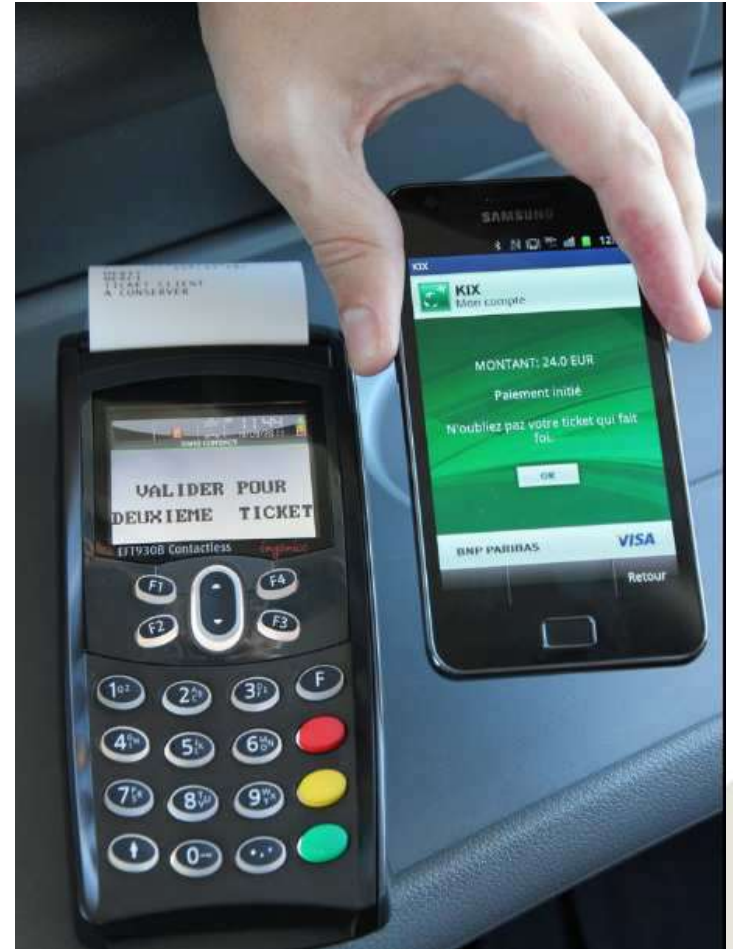
Internet

Camera

Mobile WAP

Text SMS

Voice



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Interoperable and SIM-Secured NFC



Sticker

- Easy to produce & attach
- No interaction with phone
- Supports 1 service provider
- Not standardised



MicroSD

- Easy to attach
- Existing mobile devices
- Supports 1 service provider
- Customer care unclear
- Not standardised/certified



Embedded

- Supports multiple services
- Over the Air updates
- No service portability
- Customer care unclear
- Not standardised/certified




SIM-based

- SIM is certified & standardised
- Global standards (SWP)
- Supports multiple services
- OTA updates
- Portable SIMs
- Operator customer care

SIM-based NFC is the best solution for security, interoperability, portability and end to end customer experience



Requirements	Criticality	SIM	SMC	Embedded	Sticker
Security	Strong	😊	😊	😊	😊
Multi- services	Strong	😊	😞	😊	😞
OTA Over The Air	Strong	😊	😐	😐	😞
Battery-off mode	Strong	😊	😐	😐	😊
User experience	Frequency				
Subscribe to new services	Weekly	😊	😐	😞	😞
Temporary use of other mobile	monthly	😊	😐	😞	😞
Change of phone / OS	18 to 24 month	😊	😐	😞	😞
Cancel service, dispose of phone	18 to 24 month	😊	😊	😞	😞
Mobile loss/theft	Occasional	😊	😞	😐	😐
Mobile operator change	48 months	😐	😊	😊	😊
Summary		😊	😐	😞	😞



Mobile NFC Gains Momentum as Operators Worldwide Pledge Support for SIM-based Solution

16 November 2011, Mobile Asia Congress, Hong Kong

China Mobile and China Unicom Join Leading Operators in Backing Mobile NFC

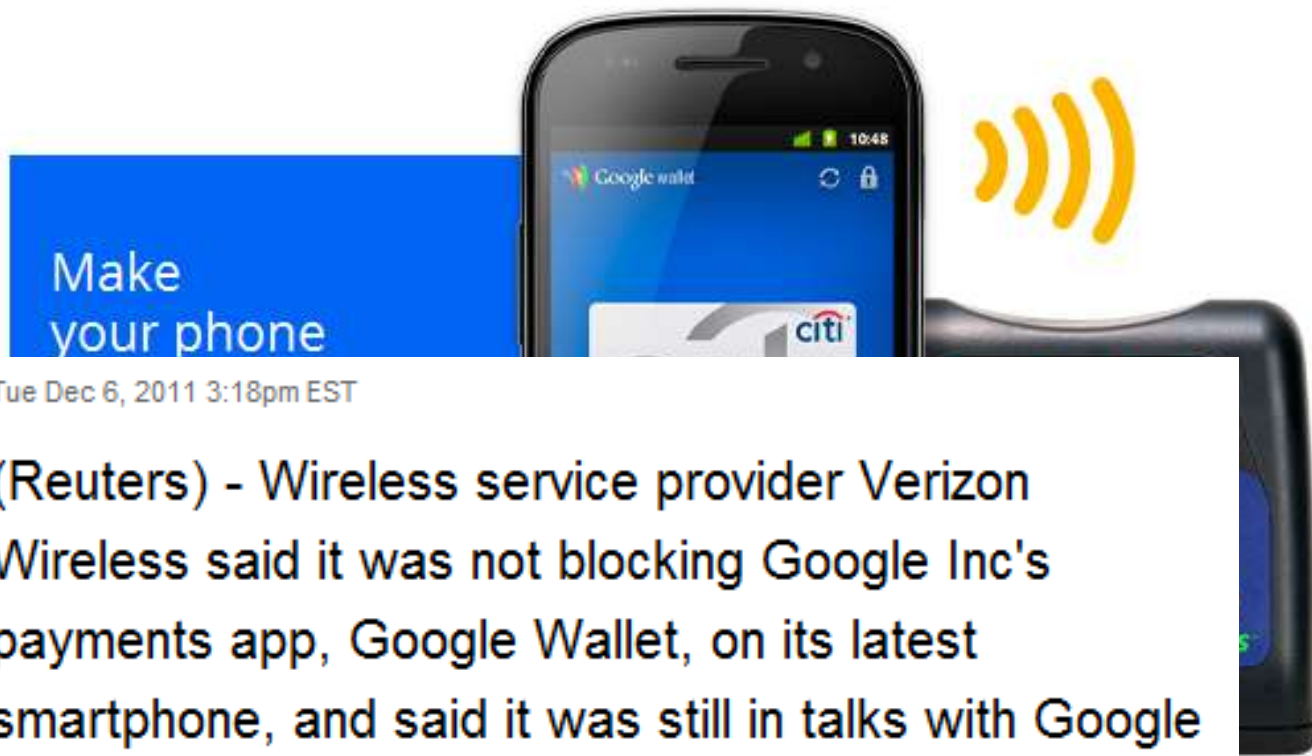
GSMA Publishes Mobile NFC Specifications to Drive Global Interoperability

The GSMA today announced that 45 of the world's leading mobile operators have committed to support and implement SIM-based Near Field Communications (NFC) solutions and services. These operators include China Mobile and China Unicom, which account for nearly 800 million connections throughout China. As an important catalyst in accelerating the adoption of NFC services, the GSMA has published a new set of industry specifications. These handset and SIM specifications will enable the development and global deployment of secure, interoperable and ubiquitous SIM-based mobile NFC services.

In addition to China Mobile and China Unicom, the operators who have committed to SIM-based NFC include: América Móvil, AT&T, AVEA, Axiata, AXIS, Bharti Airtel, Bouygues Telecom, CSL, Deutsche Telekom, Elisa Corporation, Emirates Integrated Telecommunications Company PJSC (du), Etisalat, Everything Everywhere, Globe Telecom, KPN, KT Corporation, Maxis, Mobily, MTS, Orange, Proximus, Qtel Group, Rogers Communications, Saudi Telecom Company (STC), SFR, SK Telecom, Smart, SOFTBANK MOBILE, Telecom Italia, Telecom New Zealand, Telecom Slovenije, Telefónica, Telekom Austria Group, Telenor, TeliaSonera, Telus, TMN, Turkcell, Verizon, VimpelCom, VIVA Bahrain and Vodafone Group. Additionally, ISIS, the organisation formed by AT&T Mobility, T-Mobile USA and Verizon Wireless to build a nationwide mobile commerce network in the United States, also supports SIM-based NFC.

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Tue Dec 6, 2011 3:18pm EST

(Reuters) - Wireless service provider Verizon Wireless said it was not blocking Google Inc's payments app, Google Wallet, on its latest smartphone, and said it was still in talks with Google about the service.

"Recent reports that Verizon is blocking Google Wallet on our devices are false," Verizon spokesman Jeffrey Nelson said in a statement on Tuesday.

Earlier, a Google spokesman had said that Verizon asked it not to include the function in the Galaxy Nexus smartphone due out this month. Google had declined to give more details.

The world is going mobile and Isis is setting the new standard.

For the first time, three of the largest U.S. wireless service providers — AT&T Mobility, T-Mobile USA and Verizon Wireless — have united to create a secure mobile commerce network through Isis mobile commerce communication (NFC).

By bringing together the world's leading mobile commerce network, Isis provides a secure, convenient, and mobile payment solution.



Gemalto Selected by Isis to Deploy Mobile Payment and NFC Services in the U.S.

Posted on [December 12, 2011](#) by [isisnews](#)

Austin, TX, Dec 12, 2011 - Gemalto (Euronext NL0000400653 GTO), the world leader in digital security, has been selected by Isis to secure its mobile commerce platform through Gemalto's Allynis Trusted Service Manager (TSM) solution. Isis, the mobile commerce joint venture between AT&T Mobility, T-Mobile USA and Verizon Wireless, will provide consumers and merchants with an open and secure mobile commerce platform that will revolutionize how consumers shop, pay and save.

"We selected Gemalto for their long-standing relationships with financial institutions and mobile operators, which includes experience in securely provisioning services over the air and issuing sensitive financial information to the consumer," said Ryan Hughes, Chief Marketing Officer of Isis. "Gemalto's dedication to security is unmatched in the industry and will provide the Isis Mobile Commerce Platform with the necessary infrastructure to ensure

- HOME
- HOW IT WORKS
- THE ISIS STORY
- NEWSROOM

Merchants Issuers

General inquiries? questions@paywithisis.com
 Job inquiries? Isis is hiring.

DOCOMO, KDDI and SOFTBANK Establish Consortium to Promote NFC Services Compatible with Multiple International Standards

Partnerships

TOKYO, JAPAN, December 21, 2011 --- NTT DOCOMO, INC., KDDI CORPORATION and SOFTBANK MOBILE Corp. announced today their establishment of Japan Mobile NFC Consortium to coordinate the adoption of multiple international standards for near field communication (NFC) technologies incorporated in their mobile devices and services.

Japan's three mobile operators already offer Osaifu- Keitai™ (wallet phone) mobile services based on the contactless-IC smartcard called FeliCa®. Overseas, however, mobile operators and service providers are increasingly adopting Type A and Type B standards to develop growing markets for NFC services. In view of this worldwide trend, the consortium intends to work with mobile industry groups in Japan, including service suppliers and handset manufacturers, to incorporate compatibility with the Type A and B standards in the Japanese mobile ecosystem.

By ensuring compatibility with multiple NFC standards, the consortium aims to:

- Free mobile users in Japan, both residents and international travelers, from having to concern themselves about different NFC service standards.
- Create an environment in Japan where service providers can offer efficient, low-cost NFC services based on common standards and rules adopted by the three mobile operators.

Gemalto TSM selected for Singapore's nation-wide NFC roll-out



Gemalto, the world leader in

NFC TIMES

The premier source for news, analysis
Near Field Communication and all co

Search news, projects, operators and more

HOME NEWS FEATURES BLOGS PROFILES EVENTS PROJECT MAP

Singaporean Mobile Operators Launch NFC Payment on Android Phones

Published: Aug 22 2012

By: Dan Balaban

Two more mobile operators in Singapore have announced the commercial launch of NFC payment services, which they say will enable subscribers to tap to pay on contactless point-of-sale terminals throughout the island city-state.

SingTel, Singapore's largest mobile operator, along with telco M1, today announced availability of the services on NFC SIM cards they have put on sale to postpaid subscribers. Each telco also announced availability of their first three NFC-enabled Android phone models to run the SIMs, including the Sony Xperia S and Samsung Galaxy S Advance. M1 is also offering NFC service on the Samsung Galaxy S III.

SingTel said it is enabling subscribers to pay for retail purchases with the ez-link electronic purse issued by payment service provider EZ-Link Pte. M1 subscribers



SingTel is one of three telcos in Singapore announcing that they are commercially launching NFC services this month. All three are offering SIM-based payment, including the ez-link e-purse for retail purchases.

RELATED CONTENT

[Singapore: Telco M1 Launches NFC with Two Payment Services and Three Phones](#)



providers will be able to deploy innovative m platform will also encourage widespread p industries to join the ecosystem to offer mo product information. The complete TSM op

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China Mobile signs NFC payments partnership deal



By [Sarah Clark](#) | June 25th, 2012

The world's largest mobile network operator is to collaborate with national payments network China UnionPay, in a deal set to lead to the introduction of NFC services in up to one hundred Chinese cities.

[China Mobile](#), the world's largest mobile network operator with 667m subscribers, has signed an NFC collaboration deal with China's national payments network, [China UnionPay](#).

The deal will see the two companies working together to promote NFC payments and on the development of NFC products, technical standards, TSM interoperability and phone compatibility testing.

Beginning with pilot tests in several cities, the partners plan to gradually extend NFC payments services to one hundred Chinese cities and service areas.

Both China UnionPay and China Mobile have been actively involved in the development of mobile payments for a number of years and have each



NFC DEAL: Pictured left to right, China Mobile's VP Sha Yuejia and chairman Xi Guohua with China UnionPay chairman Su Ning and EVP Chai Hongfeng

Windows 8

SIM-based NFC



THE VERGE



By Sarah Clark | November 9th, 2011

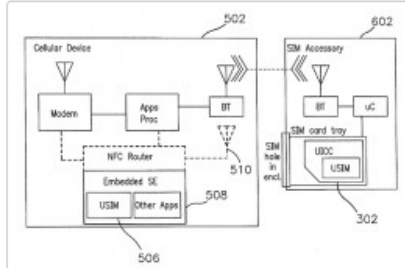
A newly published Apple patent application sets out a way for a virtual SIM card to be built into an embedded secure element which can, in turn, be attached to an NFC controller chip.

An NFC-related patent application filed by Apple in November 2010 has now been made public by the US Patent and Trademark Office.

The "Wireless network authentication apparatus and methods" patent sets out a way to incorporate a subscriber identity module (SIM) into the body of a mobile phone, within an embedded secure element.

In one example, the patent shows the embedded secure element, with the 'virtual' SIM included within it, connected to an NFC controller and with space available within the secure element for both SIM functions and "other apps". A design for a "SIM accessory" is also included.

The Apple concept is similar in nature to the NFC SIMs issued by mobile network operators bringing NFC to market – except it is in reverse. In an NFC SIM, the NFC secure element sits inside the SIM, putting the carrier in overall control of a phone's NFC functionality. In Apple's concept, the SIM



SIM WITHIN: Apple plans to put the SIM in the secure element, not the secure element in the SIM. A Bluetooth accessory could also provide a bridge.

An UnManned Airport Ticketing and Baggage Counter Kiosk

FIG. 5

Apple's iTravel App Assisting Travelers Through Security Check Points

FIG. 6

Patentfy Apple

www.patentfyapple.com

Strong industry momentum for SIM-based mobile NFC



Building upon industry standards, implementation specifications are now ready (see GSMA publications)



45 mobile operators investing in TSM infrastructure and ecosystem development)



A majority of device makers are making SWP (sim based) NFC handsets widely available



Major OS support SIM-based implementation :
Java, Android, BB, & soon Windows Phone



Visa & Mastercard clearly support SIM-based implementation & have validated SIM cards that will allow wide deployments by banks of proximity payment services



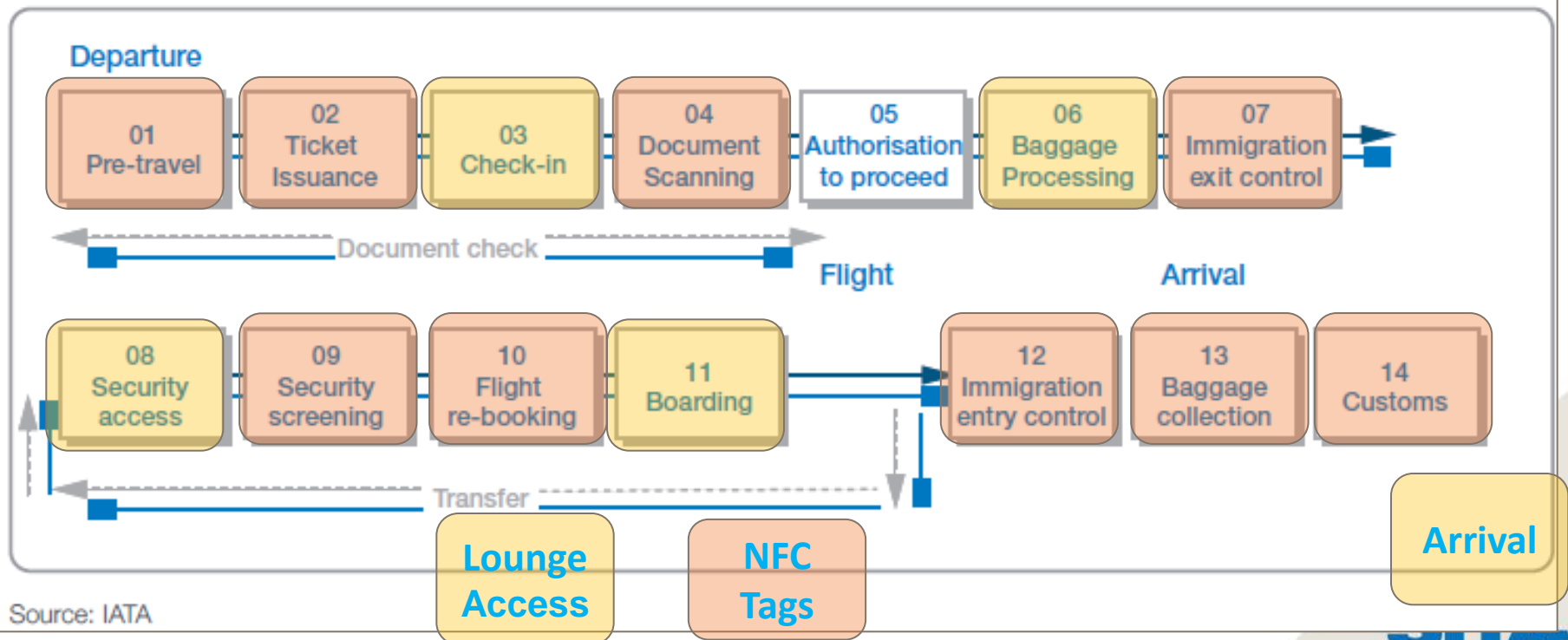
NFC use cases in Air Transport



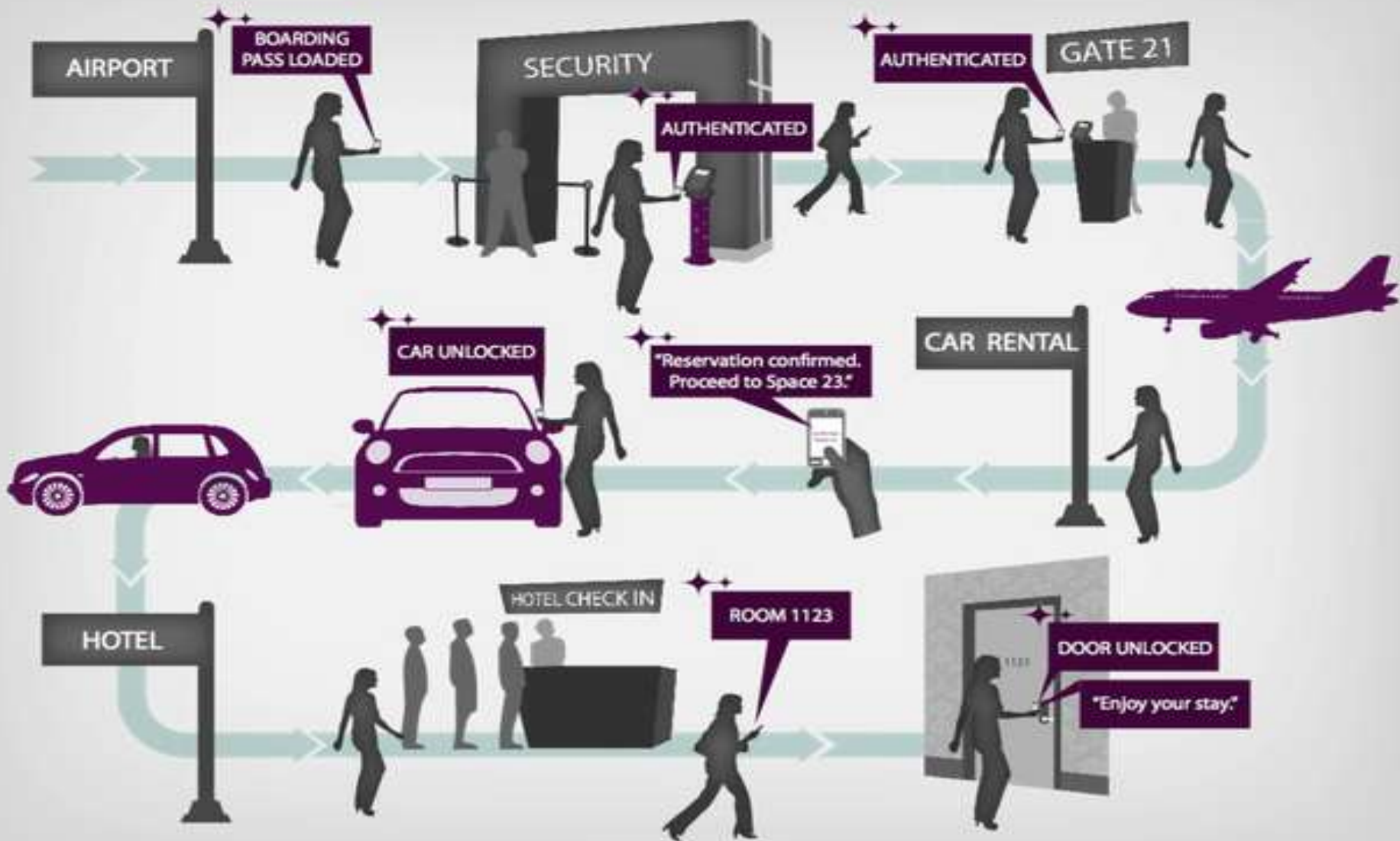
GSMA and IATA white paper defined six use cases of NFC

<http://www.iata.org/whatwedo/stb/fast-travel/Documents/iata-public-whitepaper-issue1.pdf>

The 14 step end-to-end process



Source: IATA



2D Mobile Boarding pass is not meeting industry expectations



- Operational issues

Speed, scanning,..

- User experience issues

73% of passenger would like to use mobile for check-in and boarding *

Less than **3%** succeed**



*: SITA 2011 Passenger Survey (Oct 2011)
**: SITA 2011 Passenger Survey (Oct 2011) and Airline IT Trends Survey:
Airlines estimate that today 2.9% of their passengers check in via a mobile app

Apple Passbook will help but not enough



No more hunting through your wallet searching for gift cards, coupons, passes, or tickets. Passbook keeps everything organized — and handy.

Overview

Time and Location Based



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NFC Roadmap

Mobile Biometrics



Electronic ticket Travel itinerary

Passagiername: IRMINGER/RENAUDIM
Buchungsnummer: 01234567
Ticketnummer: 724 2127 698 618
Helfer Nr.: LHM00042194432
Ausgestellt: 28 JULY 2011 / 0905 INTERNET TICKET CENTER / BARI

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T1	VON	Geneva	NACH	London (LHR)	Abfahrt	12:00	TERMINAL	1	Klasse	ECONOMY	Stamm	OK	Flug	LX354
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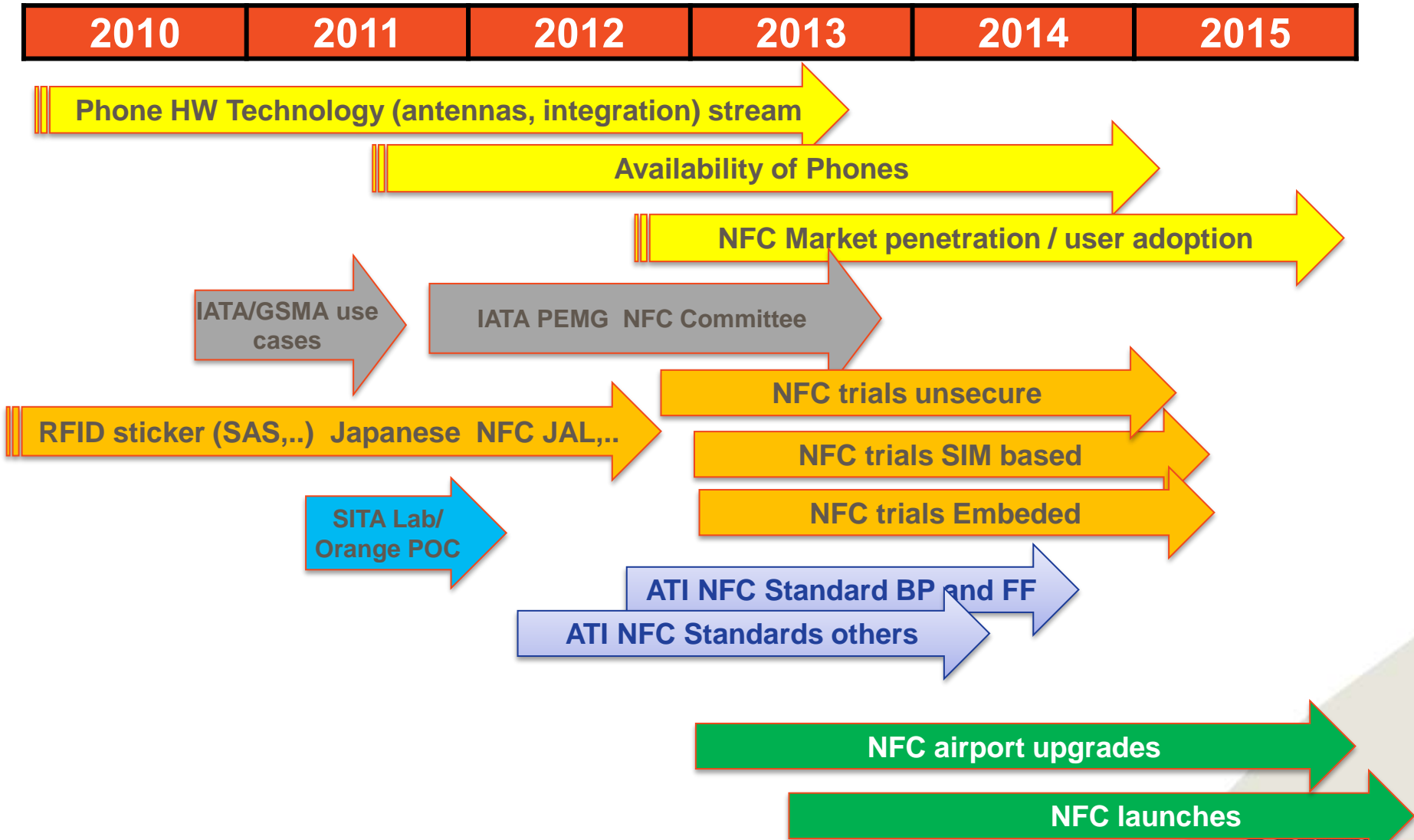
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Hilfen getting.mobi



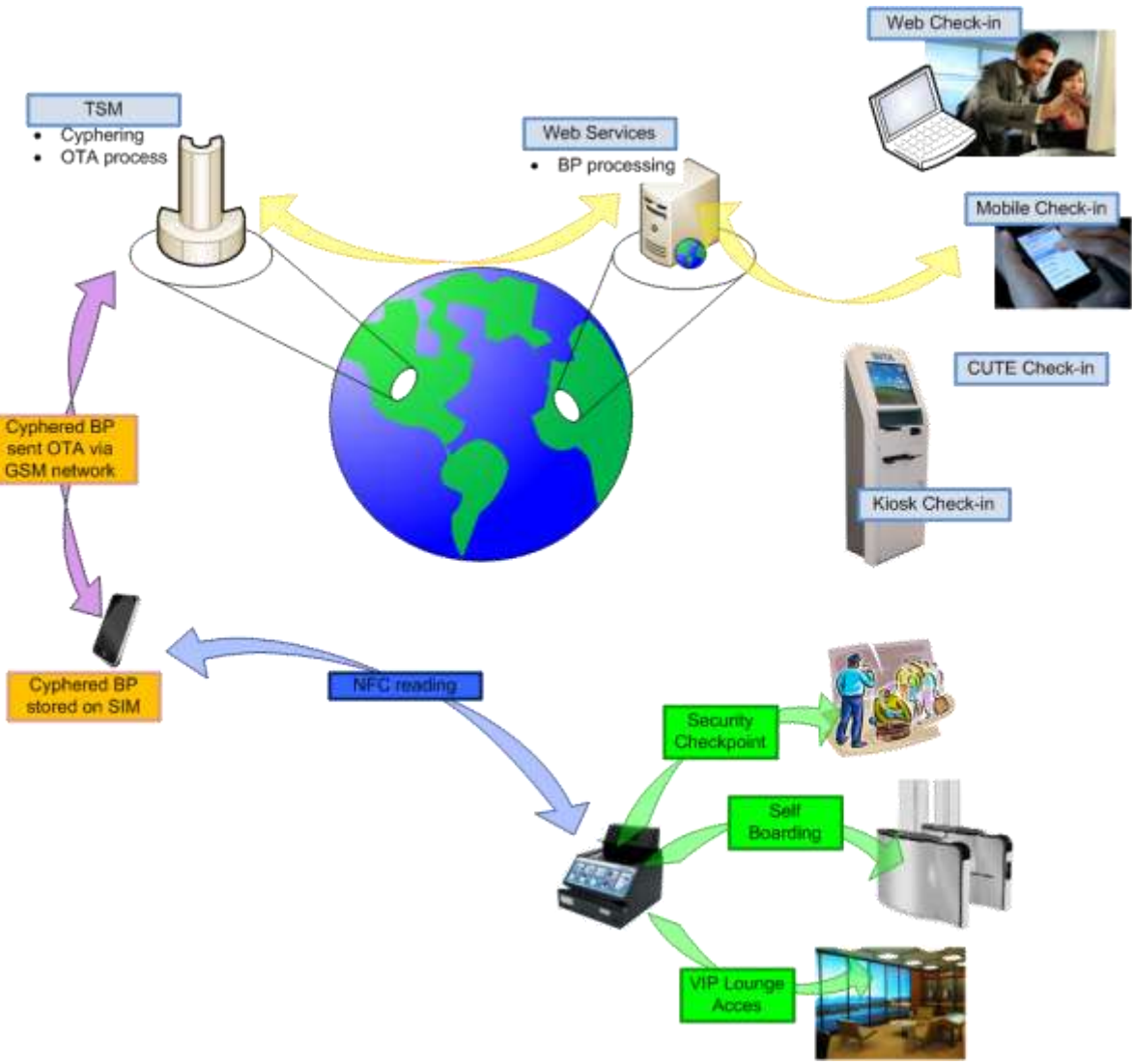
Increasing value to Air Transport Industry



NFC ROADMAP FOR THE ATI



SITA/ Orange NFC Demo Room GVA



Business Services



DESKO[®]

KABA[®]

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Aéroport Toulouse-Blagnac
expérimente* un nouveau service
mobile sans contact avec la technologie NFC

Pass Premium



Posez votre téléphone
portable sur cette cible
pour accéder à cette application



* Ce nouveau service est une expérimentation ne concernant qu'un nombre limité de clients sélectionnés.



World premiere deployment of SIM-based NFC in an Airport



BlackBerry.

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served.

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► Accueil ► Aéroport ► Accès, plans et parkings ► Stationner à l'aéroport ► Abonnez-vous en ligne et faites des économies

Actualités

■ Accès, plans et parkings

Accéder à l'aéroport

▼ Stationner à l'aéroport

Description des parcs autos

Consultez les tarifs

Calculez votre prix

Rés@P3 : Réservez votre place de stationnement

Rés@P3 : Comment ça marche

Res@P3 : Questions / réponses

► Abonnez-vous en ligne

Se répertier - plans

Résultats de trafic

Toulouse et sa région

Société Aéroport

Espace Presse

Votre aéroport

Historique

Abonnez-vous en ligne et faites des économies



Vous souhaitez une place de parking au plus près de l'aérogare toute l'année ?

Commandez directement en ligne pour un stationnement sans stress et profitez de nos abonnements annuel ou trimestriel sur l'ensemble de nos parkings, Proxiparc et EcoParc en fonction de vos besoins.

Plus besoin de vous déplacer, vous avez dorénavant la possibilité de commander votre carte d'abonnement sur notre site et vous la recevrez directement à votre domicile.

1. Demande d'abonnement > 2. Validation de la commande

1. Votre formule d'abonnement

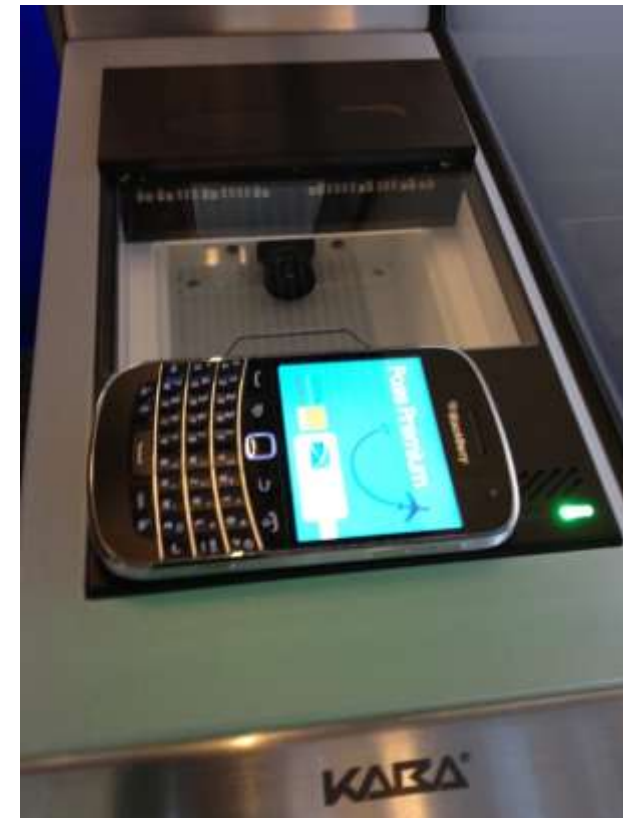
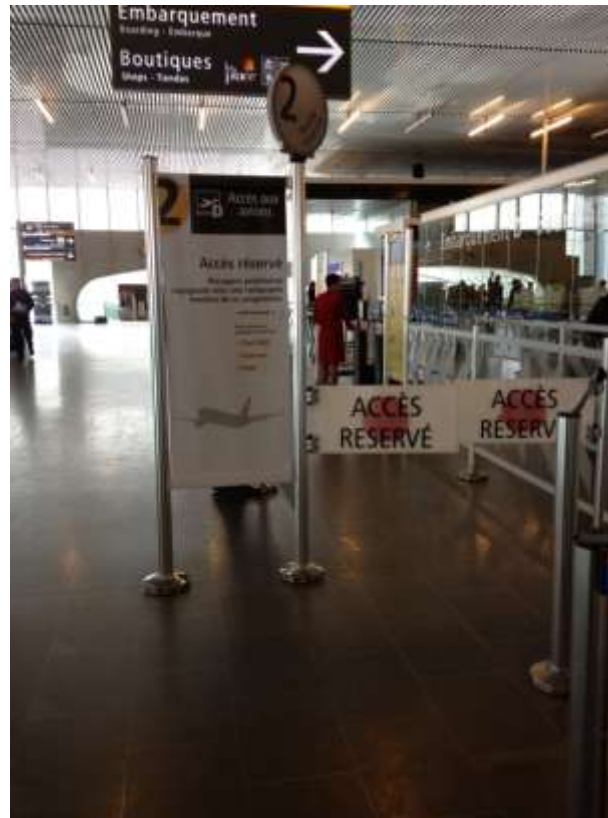
P1 **P2** **1100 €**
PROXI PROXI
Durée : 1 an
Parc de proximité
Parc couvert

P1 **P2** **340 €**
PROXI PROXI
Durée : 3 mois
Parc de proximité
Parc couvert

P5 **P6** **610 €**
ECO ECO
Durée : 1 an
Parc économique

Déjà abonné ? Pour renouveler votre abonnement, merci de contacter notre service de gestion des Parcs Autos par téléphone au 05 34 61 83 23 ou

Toulouse Blagnac Airport







Airport Buddy

Required standards for ATI



- Security not needed for BP (IATA), however some benefits would result (TSA, Airports,..)
- Advance NFC use cases require security (identity,..)
- Must deploy a solution that will survive rapid mobile OS'es iterations (> 10-15 years life and can evolve)
- Need to rely on open APIs to access NFC element
- Readers firmware standards: must know what to look for:
 - Must know cardlet/ NFC element ID in order to query that cardlet.
 - => need standard cardlet(s) for industry
 - Must know which boarding pass to select
- Must be able to work with most NFC- enabled phones, possibly with different implementations
 - **SIM based , Apple iOS,**

The logo for SITA Lab is displayed. 'SITA' is in a bold, blue, sans-serif font, followed by a vertical bar and 'Lab' in a lighter blue, sans-serif font. The text is centered within a large, blue, circular gradient shape that dominates the left side of the slide. The background of the slide is light beige with several colorful, semi-transparent spheres of various sizes and colors (blue, orange, yellow, pink) scattered across it.

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Technology research for the
Air Transport Industry

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