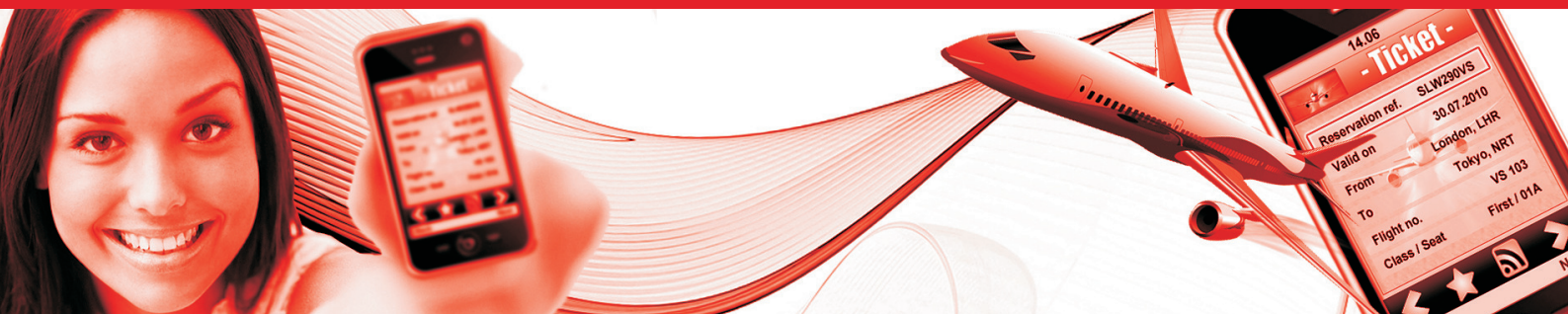


Mobile Ticket to Ride!

This whitepaper is an extract from:

Mobile Ticketing Applications & Markets Transport, Sport & Entertainment 2009-2014



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Mobile Ticket to Ride!

I. Introduction

Juniper Research defines a mobile ticketing user as **“someone who stores a ticket on their mobile phone for later redemption”** at the point of travel, the music venue, the cinema etc.

The purchase of the ticket does not need to have been initiated on the mobile phone and, more than likely, the main point of purchase for mobile tickets is currently either online at an eCommerce website, via a telephone call centre or alternatively at a physical ticket outlet or kiosk.

This is not to say that there will be occasions when the full end-to-end transaction – the purchase, storage and redemption – will all occur on the mobile device. This full end-to-end mobile commerce transaction is the ultimate mobile ticketing solution and we have included this full transaction as part of our market forecasts in this report. In terms of definition of “mobile device”, we make the distinction that the primary function must be mobile telephony. This excludes other mobile devices that have a different primary function such as entertainment, e.g. digital music player or portable games console, or travel, e.g. a GPS (Global Positioning System) enabled mapping device.

Ticketing agencies such as Ticketmaster and Tickets.com for entertainment and live events, sporting organisations such as Major League Baseball (MLB) in the USA, and airlines, rail/metro/bus companies are promoting and developing mobile ticketing applications, trials and services. In addition there is a range of vendors that are, in turn, working closely with these organisations to make mobile ticketing happen.

This white paper focuses on the technology used in mobile ticketing, and provides a summary of the global market opportunity.

2. Mobile Ticketing Technology

It is worth noting that the technology used for mobile ticketing is virtually identical to that currently used for mobile coupons, especially the code based technologies such as barcodes. The vendors that develop mobile ticketing solutions often market their products for mobile coupons as well. Through our research and analysis of the technologies adopted for mobile ticketing we have identified two most frequently deployed technologies being used for mobile ticketing currently: codes (specifically SMS and bar codes) and NFC (Near Field Communications). However, we have also observed the growing impact of mobile web based ticketing solutions and mobile apps (SIM toolkits, Java and for smart phones).

Barcode

A code for mobile ticketing is defined as any readable, either by machine or by sight, representation of information in a visual format that is displayed on the screen of the mobile phone, including numerical SMS codes. However, the most popular code technology for mobile ticketing is barcodes.

The barcode is read by a scanner that can be based on laser or optical technology. Optical scanners, using digital cameras or CCDs (Charge Coupled Device), capture the barcode and then process the data from the captured images. This technology often surpasses laser scanners on performance and reliability and is an important technology for mobile barcodes.

SMS

SMS is an important technology in mobile ticketing. SMS allows ticketing operators to gain more widespread access to mobile users than bar codes, so it is a particularly appropriate technology for national rollouts. Not only does every phone have SMS (to all intents and purposes), but also mobile phone owners are very familiar with usage. Our research found that there is a variety of different approaches to using SMS in ticketing. These include PRSMS (premium rate SMS), use of SMS coded messages such as secure encrypted codes and use of SMS to deliver bar codes and WAP links to mobile ticket sites. An example of an SMS ticket is shown below from SJ Swedish Railways:

Figure 1: SJ Mobile Ticket



Source: SJ

Apps for Mobile Web, Smart Phone, & SIM Card

With the growth of smart phones and the mobile web, many companies are launching ticketing solutions that are delivered by these routes also. Companies are developing their applications for the iPhone, Android, Windows and BlackBerry smart phones and for the mobile web.

SBB Swiss Railways offers travel information, real-time information following an incident, "Take me Home" function with GPS, plus the ability to buy (via credit card) and display tickets for public transport services.

Contactless RFID - NFC

Contactless IC (Integrated Circuit) chip technology has been around for many years, mainly in plastic smartcard format. It is used in a variety of ways: from payment to mass transport ticketing, to physical access control, to vending. Since 2005/6, the dominant, and most successful, physical mobile payment schemes have been contactless chip based - the "wave & pay" schemes using technology that includes NFC (Near Field Communication). With these schemes a contactless chip, similar to the chips that are

embedded in smartcards, is embedded into the mobile phone and interacts with a payment application that is either pre-loaded onto the phone or downloaded OTA (Over the Air).

NFC is a short-range wireless connectivity technology (also known as ISO 18092) that provides intuitive, simple, and safe communication between electronic devices. Communication occurs when two NFC-compatible devices are brought within four centimetres of one another.

FeliCa is a contactless RFID IC chip smartcard system developed by Sony, nominated as a Type 3 tag format by the NFC Forum. First deployed in the Octopus mass transport system in Hong Kong, the technology is used in a variety of cards also in countries such as Singapore and Japan. FeliCa based services are available to around 50m Japanese mobile subscribers today, largely with NTT DoCoMo, but also with KDDI and Softbank.

3. Market Segmentation

Juniper Research classifies mobile ticketing into three distinct segments that cover most of the ticketing sectors:

- Transport mTicketing
- Sporting Events mTicketing
- Entertainment & Events mTicketing

Transport ticketing includes all forms of travel that involve the issuance of tickets and includes:

- Air Travel
- Rail Travel (including international, national, regional and suburban metro/subway systems)
- Bus and Coach Travel
- Ferry/sea travel

In reality metro areas will frequently integrate different modes of transport in their geographic area into one ticket.

Sporting events mTicketing includes all of the major spectator-attended professional sporting events around the world. This includes sport at club, national and international levels. The major club sports include Association Football (Soccer), American Football, Baseball, Rugby, Cricket, Basketball and Ice-Hockey. This is by no means a complete list of all of the major club-based sports around the world but represents some of the major ones that are watched by fans in their millions.

There are also non-club sports that attract large attendances including horse-racing and motor sports, as well as large international events such as the Olympic Games and World Cup.

The third segment for mobile tickets is Entertainment and Events. This segment includes most of the live entertainment events including live music, theatre, ballet, comedy, cinema, night clubs, museums & galleries & trade shows.

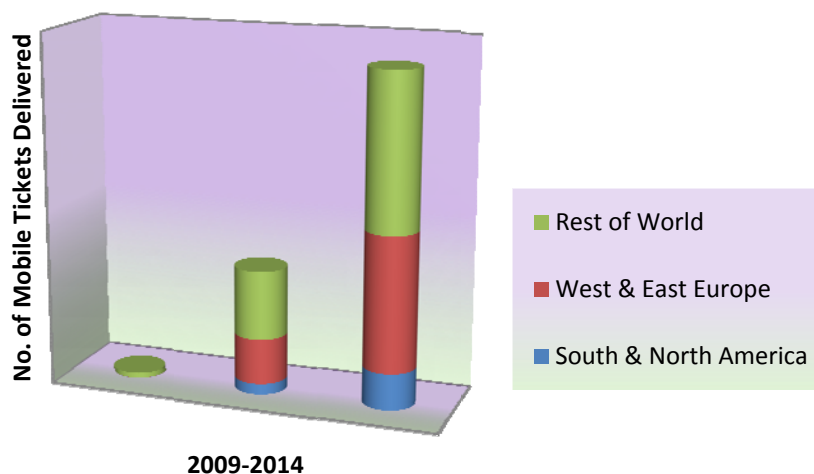
4. Market Opportunity

In 2009 the majority of mobile ticketing transactions will be in the Far East and China with the early mobile ticketing adopters located in Japan. For Japan this is still a small percentage of the total volume of tickets issued - take rail travel for example: the latest statistics available show a recorded 22 billion passenger journeys per annum, meaning that mobile tickets account for less than 2% of the total. Western Europe contributes 17%, largely due to the advanced status of transport ticketing schemes in Scandinavia and, to a lesser extent, countries such as Austria, France, Germany and Switzerland. The entertainment

and events segment is also showing strength in a number of regions including the Far East and China and Western Europe. A variety of verticals such as cinemas, concerts, night clubs and exhibitions are leading the way, whilst in the sporting segment we are seeing traction in baseball in North America.

As a result of the momentum building in the ecosystem, we are forecasting substantial growth in total mobile ticketing transactions. Beyond 2010, we are forecasting growth to nearly 15 billion tickets by 2014.

Figure 2: Total Number of Mobile Tickets Delivered (m) Split by Region 2009-2014



Source: Juniper Research

Order the Full Report

This whitepaper is taken from Juniper Research's report entitled '**Mobile Ticketing: Transport, Sport & Entertainment 2009-2014**'. In the full report, Juniper provides the most up to date view of the mobile ticketing market and includes a six year forecasting suite of all the vital data and analysis that vendors, service providers, ticketing agencies and operators in the transport, sporting events and entertainment events sectors need to maximise revenues in this emerging sector.

The report investigates the current state of the mobile ticketing market based on a primary research interviewing programme with CxO level management from a range of industry participants, including leading vendors, transport operators, industry associations, entertainment and sporting organisations, and also secondary research. As well as providing unique insight on the products, plans and strategies of a number of leading companies, the interviews enabled Juniper Research to garner the live feedback on market drivers, constraints, trends and growth prospects.

Key Questions answered by this report:

- How many mobile subscribers will use their mobiles to buy tickets over the next five years?
- Which will be the leading regions in the market in 2014?
- How many tickets will be bought by mobile over the next five years?
- What are the trends, drivers and constraints affecting the development of the market?
- How are leading ticketing agencies incorporating the mobile into ticket purchase and delivery?
- What will be the trend in ticket prices over the next five years?
- What will be the size and growth of the transport, sporting and entertainment/events mobile ticketing market segments over the next five years?

For more details on this report visit the website www.juniperresearch.com or phone +44 (0)1256 830002.

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Juniper Research specialises in providing high quality analytical research reports and consultancy services to the telecoms industry. We have particular expertise in the mobile, wireless, broadband and IP-convergence sectors. Juniper is independent, unbiased, and able to draw from experienced senior managers with proven track records.

Publication Details

Publication date: February 2010

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