

Mobile Tickets Please!

This whitepaper is an extract from:

Mobile Ticketing & Coupons
Strategies & Markets
2007-2011



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Mobile Tickets Please!

Introduction

There are very positive signs for the development and growth in both mobile ticketing and mobile coupon markets. Throughout 2007, the market, especially for mobile ticketing, has developed strong traction in all key sectors; as Don Cameron sales and marketing director of mTicketing vendor Mobiqa puts it, “mTicketing went mainstream in 2007”.

The early, predominantly operator-led, trials and pilots for mTickets and mCoupons that were essentially marketing exercises are being replaced by commercial deployments owned by the ticketing and coupon issuers. The organisations that ‘own’ 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 travel organisations such as the International Air Travel Association (IATA) and the UK’s Association of Train Operating Companies (ATOC) are either supporting or endorsing mTicketing.

Organisations that control the issuance and redemption of tickets and coupons are seeing the advantages that mobile phones have over other ticketing options, namely paper-based and electronic tickets stored on a smart card. The drivers and benefits of using a mobile phone include enhanced security, cost reduction, environmental issues, the ability to purchase and deliver ‘last minute’ tickets and perhaps the most important driver the ability to link the ticket with other mobile value added services. As the Chief Commercial Officer for tickets.com, Derek Palmer, stresses “it’s not just about delivering the ticket”.

With mobile coupons, marketers and brand owners are beginning to adopt mobile coupons because they have the ability to be accepted and used by a much wider audience than traditional paper versions. Redemption rates are generally higher than paper or other electronic versions of coupons and adoption rates, particularly, amongst the younger mobile phone users are very strong – making them a very attractive proposition to advertisers keen to tap into mobile advertising.

This white paper introduces the reader to mTicketing and mCoupons and investigates the technology being adopted and concludes with short to medium-term forecasts for both sectors.

Mobile Ticketing

Introduction & Definition

Mobile ticketing is gradually moving away from its early days as a `one-off` marketing event, usually lead by a mobile operator, and being adopted by the ticketing “owner” as a real alternative to paper and other, non mobile phone-based, electronic tickets.

During 2007 there has been real progress in the industry with central governing organisations, such as IATA (International Air Travel Association) in the air travel industry and the UK’s ATOC (Association of Train Operating Companies), recommending mobile ticketing and developing standards that will allow interoperability – an important enabler for the widespread adoption of mobile ticketing.

It is important to start off with a definition of Mobile Ticketing. 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 and 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 transaction is something of a Holy Grail in mobile ticketing and is being aided by mobile payment solutions that enable this to take place. It is interesting to note that many of the current mobile ticketing vendors are partnering with mobile payment solution providers in an attempt to enable this full end-to-end transaction, e.g. the mobile ticketing vendor Swiftpass with the mobile payment provider LUUP and Mobiqua with PayPal Mobile.

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.

Through our research and analysis of the technologies adopted for mobile ticketing Juniper Research has discovered that there are currently two main technologies being used for mTicketing. Some technologies are more suited to a particular ticketing market whilst others are available now and have the advantage of not requiring a major infrastructure investment to support them.

Juniper Research classifies the two major mTicketing technologies as:

- Code (predominantly barcode)
- Contactless (RFID and NFC)

Code

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. A code can be any readable piece of information. However, the most popular code technology for mobile ticketing is barcodes.



There are also other non-barcode, codes used for mobile ticketing. The most note-worthy are Active Media Technology's RAPOS™ PIN code and the "bCODE" from bCODE. The bCODE is a character-based code that is delivered via SMS to a mobile device and then redeemed on a bespoke reader or multimedia kiosk. The code was developed by the Australian-based vendor, bCODE, and is mainly aimed at low-volume ticketing scenarios where a richer multimedia experience is required. Active Media Technology's RAPOS™ system was used in the very successful film voucher system run by the mobile operator Orange, the two-for-one cinema ticket offer called "Orange Wednesdays".

There are one-dimensional (1D) and two-dimensional (2D) barcodes in use today. Traditional 1D barcodes use the bar's width to encode just a product or account number. The 1D barcode is widely used as the Universal Product Code (UPC) on millions of consumer items. 2D barcodes, such as PDF417, MaxiCode and DataMatrix, are scanned horizontally and vertically and hold considerably more data.

In Japan most mobile phone barcode applications use the QR Code, a 2D matrix code developed in 1994. The "QR" is derived from "Quick Response" as it can be decoded at high speed.

Contactless (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 including from payment, mass transport ticketing, physical access control and vending.



The standard for contactless smart card communications is ISO 14443, dated 2001. It defines two types of contactless cards ("A" and "B") and allows for communications at distances up to 10 cm. An alternative standard for contactless smart cards is ISO 15693, which allows communications at distances up to 50 cm. ISO 14443 defines a contactless, or proximity, card that uses RFID (Radio Frequency Identification) to communicate with a reader, through the use of a magnetic loop antenna operating at 13.56 MHz. ISO 14443 consists of four parts and describes two types of cards: type A and type B. ISO 14443 uses the term PCD (proximity coupling device) (or reader) and PICC (proximity integrated circuit card).

The most widely installed contactless smartcard technology in the world, with over 500 million smart card chips and 5 million readers sold, is MIFARE. The German based company uses technology patented by NXP Semiconductors and is based on ISO 14443 Type A. One example of a MIFARE implementation is the Oyster card used by Transport for London, for use on the London Underground.

Another technology comes out of the Far East with the Sony developed FeliCa smartcard. FeliCa is not ISO 14443 compliant but it does comply with ISO 18092 (the NFC standard). FeliCa is used by Hong Kong's Mass Transport System, with the Octopus card, and in Japan with the Edy, supplied by bitWallet, prepaid rechargeable contactless card. We shall investigate FeliCa in a separate section.

The integration of contactless IC technology onto the mobile phone is the natural progression for this technology. The mobile phone has a number of distinct advantages over the smart card; the phone has evolved into a powerful computer that can provide value-added services, such as marketing and advertising, to the payment or ticketing operator.

Sony's FeliCa is not ISO 14443 compliant but it does comply with ISO 18092 (the NFC standard). FeliCa is used by Hong Kong's Mass Transport System, with the Octopus card, and in Japan with the Edy, supplied by bitWallet, prepaid rechargeable contactless card.

Figure 1: Uses of Sony FeliCa Chip



Source: Sony

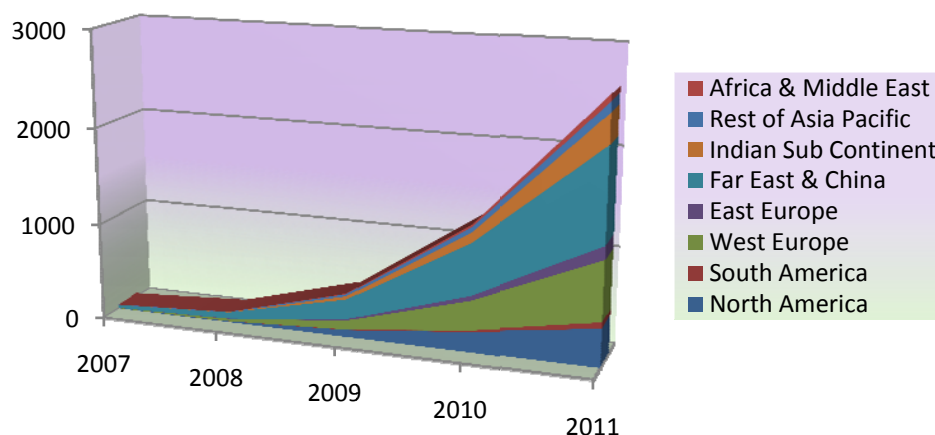
The Market for Mobile Tickets

There will be growth in all mobile ticketing sectors. Growth will be especially noticed in Travel and Sporting Event mobile ticketing. Juniper Research forecasts that there will be substantial growth in the total number of mobile ticketing transactions per year in the five-year period from 2007 until 2011, with a figure of over 1.2 2.6 billion transactions by the close of 2011. This is a substantial figure and represents a significant potential for those mTicketing services providers that are generating revenue on a per transaction basis.

The report found clear evidence that the sector is gearing up for major launches over the next few years. Early trials, mainly led by mobile network operators, are now migrating into commercial services that are controlled by the ticketing issuers themselves.

Benefits for the ticketing issuers include reduced costs, better security to help the fight against fraud and improved environmental footprint by reducing paper. Early use of mobile barcode technology will be gradually complimented by the emergence of NFC (Near Field Communication) in particular for the transportation ticketing sector where there are already commercial deployments in the Far East and important trials in Western Europe and North America.

Figure 2: Total Number of Mobile Ticketing Transactions per annum (m): Regional Forecast 2007-2011



Source: Juniper Research

Order the Full Report

Mobile Ticketing & Coupons: Strategies & Markets 2007-2011

This whitepaper is taken from Juniper Research's report entitled "Mobile Ticketing & Coupons: Strategies & Markets 2007-2011".

In the full report, Juniper Research illustrates the current and near-future status of mobile ticketing and coupons applications and services with interviews and analysis from representatives of some of the leading organisations in these important sectors of the mobile commerce industry.

This invaluable report provides five year forecasts, across eight regions of the world for both ticketing and coupons. Each sector has projections both in terms of transaction volume and transaction values. For mobile, ticketing forecasts are broken down into separate industry sectors:

- Travel mTicketing (Air, Rail, Bus and Coach travel, including car parking)
- Sporting Events mTicketing
- Entertainment & Events mTicketing

Further details can be found at www.juniperresearch.com. Alternatively please contact Michele Ince at micheleince@juniperresearch.com or telephone +44 (0)1256 830002.

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Publication Details

Publication date: March 2008

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