

Table of Contents

Glossary	11
Executive Summary	15
Introduction	15
Mobile Commerce Series.....	16
Sector Focus	16
Transport Operators Strategies & Markets	16
Sporting Event Owners Strategies & Markets	17
Entertainment & Event Organisers Strategies & Markets	18
Retailers Strategies & Markets	19
Handset Manufacturer Strategies & Markets	19
Market Projections	19
Mobile Operator Strategies & Markets.....	20
Figure ES1: All Mobile Phone Users (m) Regional Forecast 2007-2011	20
Table ES1: All Mobile Phone Users (m) Regional Forecast 2007-2011	21
Mobile Ticketing.....	21
i. Mobile Ticketing Traffic.....	22
Figure ES2: Total Number of Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	23
ii. Mobile Ticketing Transaction Value.....	23
Figure ES3: Total Mobile Ticketing Transaction Value (\$m): Regional Forecast 2007-2011	23
Table ES2: Total Mobile Ticketing Transaction Value (\$m): Regional Forecast 2007-2011	24
Figure ES4: Total Mobile Coupon Transaction Value (\$m): Regional Forecast 2007-2011 ..	25
Table ES3: Total Mobile Coupon Transaction Value (\$m): Regional Forecast 2007-2011 ..	25
Conclusions.....	26

I. Mobile Ticketing

1.1 Introduction	27
1.2 Definition	27
1.3 Technology	28
1.3.1. Code (predominately Barcode)	28
Figure 1.1: One-Dimensional Barcode	29
Figure 1.2: Two-Dimensional Barcode (PDF417)	29
Figure 1.3: Two-Dimensional Barcode	29

Figure I.4: Two-Dimensional Barcode (MaxiCode) (DataMatrix).....	30
Figure I.5: Two-Dimensional Barcode (QR Code).....	30
i. Is it Reliable?.....	30
I.3.2. Contactless (RFID & NFC)	31
Figure I.6: Oyster Card Using MIFARE Technology	31
i. NFC (Near Field Communications).....	32
a. Uses.....	32
Figure I.7: Uses of NFC	32
b. NFC Forum.....	33
c. Standards & Specification.....	33
Figure I.8: Typical NFC Implementation.....	33
d. Security	33
e. Operating Modes	34
f. Emerging Technology	34
g. Where are the Handsets?	34
Figure I.9: Samsung D500	35
Figure I.10: Sagem m700X Contactless	35
Figure I.11: Nokia 6131	36
h. Roadmap and Forecasts.....	36
Table I.1: NFC Forum Roadmap	36
ii. RFID	37
a. FeliCa	37
- Standards & Specification	37
Figure I.12: Sony FeliCa IC Card and Reader/Writer.....	37
- Security	38
Figure I.13: Sony FeliCa Security Features.....	38
Figure I.14: FeliCa Networks Platform Management.....	38
Figure I.15: Uses of FeliCa.....	39
I.4 Mobile Ticketing Classification	39
I.4.1. Travel mTicketing.....	39
I.4.2. Sporting Events mTicketing.....	40
I.4.3. Entertainment & Events mTicketing.....	40
I.5 Drivers & Constraints	40
Figure I.16: Mobile Tickets; Summary of Market Drivers & Constraints	41
I.5.1 Drivers.....	41
i. User Demand.....	41
ii. Cost Savings	41
iii. Increase in ARPU	42
iv. One-2-One Marketing	42

v. Enhanced Security.....	42
vi. Increase in Customer Retention for Mobile Operators – Lower Churn.....	42
vii. Queue Busting.....	43
viii. Environmental.....	43
ix. Last Minute Sales	43
x. Mobile Value Added Services (MVAS)	43
I.5.2 Constraints.....	43
i. Lack of Handsets.....	43
ii. Business Model Issues.....	44
iii. Support Issues – Who Owns the Customer?.....	44
iv. Revenue Sharing Issues.....	44
v. MMS Issues.....	44
vi. Mobile Barcode Reading Issues.....	44
vii. Operator Left Out in the Cold.....	45
I.6 Applications & Services.....	45
I.6.1 Transport Mobile Tickets.....	45
i. Air Travel Ticketing Applications & Services Examples	45
Figure I.17: Mobile Boarding Pass Example	47
a. North America.....	48
b. Western Europe.....	48
c. Asia Pacific.....	49
d. Rest of Asia Pacific	50
ii. Rail Travel Ticketing Applications & Services Examples.....	50
a. North America.....	51
b. West Europe	52
Figure I.18: The Nokia 6131 NFC Mobile Phone.....	53
c. Asia Pacific.....	54
iii. Bus and Coach Travel Ticketing Applications & Services Examples.....	54
a. West Europe.....	55
Figure I.19: Citylink SMS mTicket.....	55
I.6.2 Sporting Events Mobile Tickets.....	56
i. Applications & Services Examples	56
a. North America.....	57
b. West Europe	58
I.6.3 Entertainment & Events Mobile Tickets.....	59
i. Applications & Services Examples	59
a. North America.....	59
Figure I.20: The bCODE MediaHub 200 Multi-media Kiosk	60
b. West Europe	61

Figure 1.21: Digitick mTicket Barcode on a Mobile Phone	62
Figure 1.22: Olympique Marseille Ticketing Website	63
c. Rest of Asia Pacific	64

2. Mobile Ticketing Forecasts

2.1 Mobile Ticketing Users.....	65
Table 2.1: Mobile Phone Users (%) Who Use Mobile Ticketing: Regional Forecast 2007-2011	66
Figure 2.1: Total Mobile Phone Users (m) Who Use Mobile Ticketing: Regional Forecast 2007-2011	66
Table 2.2: Total Mobile Phone Users (m) Who Use Mobile Ticketing: Regional Forecast 2007-2011	67
2.2 Mobile Ticketing Traffic.....	67
Figure 2.2: Average Number of Mobile Ticketing Transactions Made per Mobile Ticketing User Per Annum: Regional Forecast 2007-2011	67
Table 2.3: Average Number of Mobile Ticketing Transactions Made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011	68
Figure 2.3: Total Number of Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	69
Table 2.4: Total Number of Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	69
2.3 Mobile Ticketing Transaction Value	69
Table 2.5: Average Mobile Ticketing Transaction Value (\$): Regional Forecast 2007-2011	70
Figure 2.4: Total Mobile Ticketing Transaction Value (\$m): Regional Forecast 2007-2011	70
Table 2.6: Total Mobile Ticketing Transaction Value (\$m): Regional Forecast 2007-2011	71
2.4 Transport Mobile Ticketing Forecasts	71
2.4.1 Transport Mobile Ticketing Users.....	71
Table 2.7: Mobile Phone Users (%) Who Use Transport Mobile Ticketing: Regional Forecast 2007-2011	72
Figure 2.5: Total Mobile Phone Users (m) Who Use Transport Mobile Ticketing: Regional Forecast 2007-2011	72
Table 2.8: Total Mobile Phone Users (m) Who Use Mobile Ticketing: Regional Forecast 2007-2011	73
2.4.2 Transport Mobile Ticketing Traffic.....	73
Figure 2.6: Average Number of Transport Mobile Ticketing Transactions Made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011	73
Table 2.9: Average Number of Transport Mobile Ticketing Transactions Made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011	74

Figure 2.7: Total Number of Transport Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	74
Table 2.10: Total Number of Transport Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	75
2.4.3 Transport Mobile Ticketing Value.....	75
Table 2.11: Average Transport Mobile Ticketing Transaction Value (\$): Regional Forecast 2007-2011	76
Figure 2.8: Total Transport Mobile Ticketing Transaction (\$m): Regional Forecast 2007-2011	76
Table 2.12: Total Transport Mobile Ticketing Transaction (\$m): Regional Forecast 2007-2011	77
2.5 Sporting Events Mobile Ticketing Forecasts.....	77
2.5.1 Sporting Events Mobile Ticketing Users	77
Table 2.13: Mobile Phone Users (%) Who Use Sporting Events Mobile Ticketing: Regional Forecast 2007- 2011	78
Figure 2.9: Total Mobile Phone Users (m) who use Sporting Events Mobile Ticketing: Regional Forecast 2007-2011	78
Table 2.14: Total Mobile Phone Users (m) Who Use Sporting Events Mobile Ticketing: Regional Forecast 2007-2011	79
2.5.2 Sporting Events Mobile Ticketing Traffic	79
Figure 2.10: Average Number of Sporting Events Mobile Ticketing Transactions Made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011	80
Table 2.15: Average Number of Sporting Events Mobile Ticketing Transactions made per Mobile Ticketing user per annum: Regional Forecast 2007-2011	80
Figure 2.11: Total Number of Sporting Events Mobile Ticketing Transactions per Annum (m): Regional Forecast 2007-2011	81
Table 2.16: Total Number of Sporting Events Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011	81
2.5.3 Sporting Events Mobile Ticketing Value.....	81
Table 2.17: Average Sporting Events Mobile Ticketing Transaction Value (\$): Regional Forecast 2007-2011	82
Figure 2.12: Total Sporting Events Mobile Ticketing Transaction (\$m): Regional Forecast 2007-2011	82
Table 2.18: Total Sporting Events Ticketing Transaction (\$m): Regional Forecast 2007-2011	83
2.6. Entertainment & Events Mobile Ticketing Forecasts.....	83
2.6.1 Entertainment & Events Mobile Ticketing Users.....	83
Table 2.19: Mobile Phone Users (%) who use Entertainment & Events Mobile Ticketing: Regional Forecast 2007-2011	84
Figure 2.13: Total Mobile Phone Users (m) Who Use Entertainment & Events Mobile Ticketing: Regional Forecast 2007-2011	84
Table 2.20: Total Mobile Phone Users (m) Who Use Entertainment & Events Mobile Ticketing: Regional Forecast 2007-2011	85
2.6.2 Entertainment & Events Mobile Ticketing Traffic	85

Figure 2.14: Average Number of Entertainment & Events Mobile Ticketing Transactions made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011 85

Table 2.21: Average Number of Entertainment & Events Mobile Ticketing Transactions Made per Mobile Ticketing User per Annum: Regional Forecast 2007-2011 86

Figure 2.15: Total Number of Entertainment & Events Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011 86

Table 2.22: Total Number of Entertainment & Events Mobile Ticketing Transactions (m) per Annum: Regional Forecast 2007-2011 87

2.6.3 Entertainment and Sporting Events Mobile Ticketing Value 87

Table 2.23: Average Entertainment & Events Mobile Ticketing Transaction Value (\$): Regional Forecast 2007-2011 88

Figure 2.16: Total Entertainment & Events Mobile Ticketing Transaction (\$m): Regional Forecast 2007-2011 88

Table 2.24: Total Entertainment & Events Mobile Ticketing Transaction (\$m): Regional Forecast 2007-2011 89

3. Mobile Coupons & Forecasts

3.1 Introduction 91

3.2 Definition 92

3.3 Technology 92

3.4 Drivers & Constraints 93

 Figure 3.1: Mobile Coupons; Summary of Market Drivers & Constraints 93

3.4.1 Drivers 93

 i. User Demand 94

 ii. Cost Savings 94

 iii. Increase in ARPU 94

 iv. One-2-One Marketing 94

 v. Increase in Customer Retention for Mobile Operators – Lower Churn 94

 vi. Environmental 94

 vii. Higher Conversion Rates 94

 viii. Mobile Value Added Services (MVAS) 95

 ix. Reduced Fraud 95

3.4.2 Constraints 95

 i. Participation of Retailers 95

 ii. How to Manage the Coupon on the Phone? 95

 iii. MMS Issues 95

 iv. Mobile Barcode Reading Issues 95

 v. Operator Left Out in the Cold 96

 vi. Availability of NFC Handsets and Terminals 96

3.5 Application & Services.....	96
3.5.1 Applications & Services Examples	96
i. North America.....	96
Figure 3.2: Cellfire Website Showing Available Coupons	97
b. West Europe	98
c. Far East & China.....	99
3.6 Market Forecasts.....	100
3.6.1 Mobile Coupon Forecasts.....	100
i. Mobile Coupon Users	100
Table 3.1: Mobile Phone Users (%) Who Use Mobile Coupons: Regional Forecast 2007-2011	100
Figure 3.3: Total Mobile Phone Users (m) Who Use Mobile Coupons: Regional Forecast 2007-2011	101
Table 3.2: Total Mobile Phone Users (m) Who Use Mobile Coupons: Regional Forecast 2007-2011	101
ii. Mobile Coupon Traffic	101
Figure 3.4: Average Number of Mobile Coupon Transactions Made per Mobile Coupon User per Annum: Regional Forecast 2007-2011	102
Table 3.3: Average Number of Mobile Coupon Transactions made per Mobile Coupon User per Annum: Regional Forecast 2007-2011	102
Figure 3.5: Total Number of Mobile Coupon Transactions (m) per Annum: Regional Forecast 2007-2011	103
Table 3.4: Total Number of Mobile Coupon Transactions (m) per Annum: Regional Forecast 2007-2011	103
iii. Mobile Coupon Transaction Value	103
Table 3.5: Average Mobile Coupon Transaction Value (\$): Regional Forecast 2007-2011	104
Figure 3.6: Total Mobile Coupon Transaction Value (\$m): Regional Forecast 2007-2011	104
Table 3.6: Total Mobile Coupon Transaction Value (\$m): Regional Forecast 2007-2011	105

4. Mobile Ticketing & Coupon Vendors

4.1 Introduction	107
4.2 Vendors.....	107
4.2.1 ActiveMedia.....	107
Figure 4.1: RAPOS Platform	108
Figure 4.2: ActiveMedia Technology Mobile Ticketing Lifecycle.....	109
4.2.2 bCODE	109
Figure 4.3: The bCODE MediaHub 200.....	110

4.2.3 Cellfire.....	111
Figure 4.4: Cellfire Mobile Coupon Process.....	112
4.2.4 Gavitec.....	113
i. EXIO.....	113
Figure 4.5: Gavitec EXIO Module.....	113
ii. MD-20.....	114
Figure 4.7: The Gavitec MD-20 OEM Code Reader.....	114
iii. Lavasphere.....	114
Figure 4.7: Gavitec Lavasphere Software Product.....	114
4.2.5 The Light Agency (Shop Scan Save).....	115
4.2.6 Mobiqua.....	116
Figure 4.8: Mobiqua Mobile Ticket on a Mobile Phone.....	117
4.2.7 Parkmobile.....	118
4.2.8 Swiftpass.....	119
Figure 4.9: Mobile Ticketing at The Eden Project.....	120

5. Mobile Ticketing & Coupons: Strategies & Markets

5.1 Introduction.....	123
5.2 Transport Operators Strategies & Markets.....	124
5.2.1 Introduction.....	124
i. Air Travel Strategy - IATA Simplifying the Business Programme.....	126
ii. The Market for Ticketing in Air Travel.....	128
iii. Rail Travel Strategy.....	128
iv. The Market for Ticketing in Rail Travel.....	129
5.3 Sporting Event Owners Strategies & Markets.....	130
5.3.1 Sporting Event Owners Strategy.....	130
5.3.2 The Market for Ticketing in Sporting Events.....	131
5.4 Entertainment & Event Organisers Strategies & Markets.....	131
5.4.1 Entertainment & Event Organisers Strategy.....	131
5.4.2 The Market for Ticketing in Entertainment & Events.....	132
5.5 Retailers Strategies & Markets.....	133
5.5.1 Retailers Strategy.....	133
5.5.2 The Market for Coupons with Retailers.....	133
5.6 Handset Manufacturer Strategies & Markets.....	134
5.7 Mobile Operator Strategies & Markets.....	134
5.7.1 Revenue Problems.....	135
i. Falling Voice Revenues.....	135

- ii. Margin Squeeze 135
- iii. Revenue Substitution & Cannibalisation Issues 135
- iv. Increase in Data ARPU 136
- 5.7.2 Revenue Opportunities 136
 - i. How Do Operators Make Money Out of Mobile Ticketing and Mobile Coupons?..... 136

6. Standards & Forums

- 6.1 Introduction 137
 - 6.1.1 Who is Doing What? 137
 - Table 6.1: Overview of Forum Activity 137
- 6.2 Association of Train Operating Companies (ATOC) 138
 - 6.2.1 Members 138
- 6.3 ETSI 139
 - 6.3.1 Members 139
- 6.4 The GSM Association 140
 - 6.4.1 Members 140
- 6.5 International Air Travel Association (IATA) 140
 - 6.5.1 Members 141
- 6.6 International Organisation for Standards (ISO) 141
 - 6.6.1 Members 141
- 6.7 NFC Forum 141
 - 6.7.1 Members 142