

Mobile Messaging & IP Evolution

Players, Strategies & Forecasts 2009-2014



Table of Contents

Glossary 18

Executive Summary

Types of Mobile Messaging 22

VAS & Voice, Video and Other Services 25

Market Evolution & Convergence 26

Mobile Messaging Market Opportunity..... 28

Mobile Messaging Challenges 30

Future Mobile Awards 2009 32

I. Challenges, Conclusions & Recommendations

I.1 Introduction 34

I.2 Challenges 34

I.3 Conclusions & Recommendations 46

2. Commercial Landscape for Mobile Messaging

2.1 Introduction 54

2.2 Mobile Messaging Market Overview 54

 2.2.1 Mobile Messaging Market Definitions 55

 i. Mobile Messaging Categories..... 55

 ii. Mobile Messaging Experiences 55

 Table 2.1: Synchronous and Asynchronous Messaging Types..... 55

 iii. Motivation and Usage Scenarios 56

 iv. Mobile Messaging Mechanisms 56

 a. Conversation Thread..... 56

 b. Converged Inbox..... 56

 c. Emoticons 56

 Figure 2.1: Examples of Emoticons..... 57

 d. Predictive Text..... 57

 e. Presence 57

 f. Text Speak 57

 2.2.2 Market Drivers 57

 i. Bundled/Unlimited Tariffs..... 58

 ii. Cultural Influences 58

 iii. Prosumer 58

 iv. Youth Market and Online Communities..... 59

 Table 2.2: US Teens Communications Habits 59

2.3 Messaging Service Development 60

 2.3.1 SMS 60

 i. Background..... 60

 ii. Adoption 61

 iii. Commercial Options..... 61

 a. Mobile-originated SMS 61

- Table 2.3: Retail Cost per SMS (by Region) 2008-2013 62
 - b. Mobile-terminated SMS..... 62
 - c. Premium-Rate SMS (PRSMS)..... 62
 - d. Expanding SMS Services 62
- Figure 2.2: The SMS/MMS Market..... 63
- i. Company Profile: Anam Mobile..... 63
 - a. Company Background 63
 - b. Products and Services 63
 - c. Strategy..... 64
- ii. Company Profile: TeleMessage 65
 - a. Company Background 65
 - b. Products and Services 65
- Figure 2.3: The TeleMessage Architecture 66
- c. Case Study: AIS (Thailand) 67
- 2.3.2 MMS..... 67
 - i. Background 67
 - ii. Adoption..... 68
 - a. MDA (Mobile Data Association)..... 68
 - Table 2.4: Growth Of UK SMS and MMS Volumes, 2007-2008 68
 - iii. Commercial Options 68
 - Table 2.5: Retail Cost Per MMS (\$), Forecast 2009-2014 69
 - a. MMS Postcard Service..... 69
 - i. Company Profile: Acision..... 69
 - a. Company Background 69
 - b. Products and Services 69
 - Messaging..... 70
 - Mobile Marketing..... 71
 - Figure 2.4: Acision’s Mobile Marketing Architecture..... 71
 - Charging Solutions 71
- 2.3.3 Mobile Email 71
 - i. Background 71
 - Table 2.6: Mobile Email Challenges 72
 - ii. Adoption..... 72
 - iii. Commercial Options 73
 - Table 2.7: Cost Per Email Monthly Subscription (\$), Forecasts 2009-2014 74
 - Figure 2.5: The Mobile Email Market..... 74
 - a. ASP/NOC..... 74
 - b. Behind the Firewall 75
 - c. Webmail 75
 - iv. Company Profile: SEVEN 75
 - a. Company Background 75
 - b. Products and Services 76
 - c. 3 UK..... 76
 - d. Telefonica 76
 - v. Company Profile: Visto..... 76
 - a. Company Background 76
 - b. Products and Services 77
 - Figure 2.6: Visto Mobile Platform Options..... 77
 - c. Strategy..... 78
- 2.3.4 Mobile IM 78
 - i. Background 78
 - a. AIM (AOL Instant Messenger)..... 79
 - b. Google Talk..... 79
 - c. Yahoo! Messenger 79
 - d. Windows Live Messenger 79
 - ii. Adoption..... 79
 - iii. Commercial Options 80
 - Figure 2.7: Mobile IM Market..... 80
 - Table 2.8: Cost per Monthly IM Subscription, Forecasts 2009-2014..... 81
 - iv. Company Profile: Orange France..... 81
 - a. Company Background 81

Table 2.9: Orange France KPIs Q4 2007 to Q4 2008	82
b. Strategy	82
v. Company Profile: eBuddy	82
a. Company Background	82
b. Products and Services	83
c. Strategy	83
Table 2.10: eBuddy Users & Revenues by Region	83

3. Enterprise Mobile Messaging

3.1 Introduction	86
3.2 Market Overview	86
3.2.1 Background	86
3.2.2 Adoption	87
3.2.3 Commercial Options	88
i. Company Profile: iAnywhere (Sybase)	88
a. Company Background	89
b. Products and Services	89
- Afaria Mobile Management and Security Software	89
- iAnywhere Mobile Office	89
Figure 3.1: Mobile Inbox of the Future	89
c. Strategy	89
3.3 SMS & MMS	90
i. PageOne	90
a. Company Background	91
Table 3.1: Revenue and Net Income Growth (\$m) 2004-2008	91
b. Products and Services	91
Figure 3.2: PageOne's Network-Independent Messaging Architecture	92
ii. Clickatell	92
a. Company Background	92
b. Products and Services	93
Table 3.2: Clickatell Messaging Pricing SMS-MT & SMS-MO – Germany	93
Figure 3.3: The Enterprise Messaging Gateway Value Chain	94
c. Strategy	94
3.4 Mobile Email	94
i. Company Profile: Isode	95
a. Company Background	95
b. Products and Services	95
Figure 3.4: Mobile Email Via IMAP-IDLE	95
c. Strategy	96
ii. Microsoft Windows Mobile	96
Table 3.3: Microsoft KPIs 2004-2008	97
a. Products and Services	97
b. Strategy	98
Figure 3.5: Exchange 2007 SPI DM (Device Management)	98
c. Mobile Messaging with Exchange ActiveSync	98
- Exchange ActiveSync Protocol	99
- Direct Push	99
iii. Motorola Good	99
a. Company Background	100
b. Products and Services	100
Figure 3.6: Good Mobile Connection Overview	100
c. Strategy	101
iv. RIM (Research In Motion)	101
a. Company Background	101
Table 3.4: RIM KPIs Q3 2008 to Q3 2009	102
b. Products and Services	102
- NOC (Network Operations Centre)	102

- BlackBerry MDS (Mobile Data Service)..... 102
- Figure 3.7: BlackBerry Mobile Data Service Architecture 103
- BES (BlackBerry Enterprise Server)..... 103
- BIS (BlackBerry Internet Service)..... 103
- BlackBerry Devices 103
- BlackBerry Connect..... 103
- BlackBerry Built-In..... 103
- BlackBerry Alliance Program 104
- BlackBerry Support Services..... 104
- c. Strategy..... 104
- Figure 3.8: RIM/BlackBerry Value Chain..... 104
- Bridging the Enterprise/Consumer Divide..... 105
- 3.5 Mobile IM..... 105**
- Figure 3.9: Mobile IM Enterprise Architecture..... 106
- i. Company Profile: CallWave 106
- a. Company Background 106
- b. Products and Services 107

4. Business Models

- 4.1 Introduction 108**
- Figure 4.1: P2P Mobile Messaging Commercial Evolution..... 108
- 4.2 Mobile Messaging Value Chain..... 109**
- Figure 4.2: The Mobile Messaging Value Chain 109
- 4.2.1 Value Chain Members 109
- i. Agency/SI 109
- ii. Aggregators/Hubbing Providers..... 109
- iii. ASP/ISV 110
- iv. Brands 110
- v. End User 110
- vi. MNOs..... 110
- vii. Vendors..... 110
- 4.2.2 Messaging Category Variations..... 110
- 4.2.3 Disruptive Models 111
- i. On Portal vs Off Portal/Direct-to-Consumer (D2C) 111
- a. On-Net Portal & ODP 111
- b. Off-Portal..... 111
- c. Traffic Trends..... 111
- d. The Messaging ‘Longtail’ 112
- Figure 4.3: Operator Approaches To The Value Chain..... 112
- ii. Mobile Email..... 112
- a. Emerging Business Model Options 113
- iii. Mobile IM..... 113
- iv. Personal Instant Messaging Initiative (GSMA)..... 114
- a. Strategy..... 115
- b. Challenges..... 115
- 4.2.4 Messaging Billing Evolution 116
- i. Company Profile: Patni Telecom Consulting..... 117
- a. Company Background 117
- b. Products and Services 117
- 4.3 Messaging Service Interconnection 117**
- 4.3.1 Hubbing 117
- Table 4.1: The Hubbing & Bi-Lateral Messaging Market by Region (Approx.)..... 118
- i. Aggregators..... 118
- ii. IPX 118
- Figure 4.4: Cascading Interconnect Payments 119
- Figure 4.5: The IPX Model..... 119
- iii. Company Profile: mBlox 119

a. Company Background.....	119
b. Products and Services.....	120
c. Strategy	120
Figure 4.6: The mBlox Value Chain.....	120
d. Sender Pays Data Trial	121
4.4 Advertising and Mobile Messaging	121
Figure 4.7: Mobile Advertising Mediums	122
4.4.1 Mobile Advertising Market.....	122
4.4.2 Mobile Advertising Cost Models	122
i. CPC (Cost-per-Click)	123
ii. CPM (Cost-per-Mille).....	123
iii. CPA (Cost-per-Action/Acquisition).....	123
iv. CPL (Cost-per-Call)	123
4.4.3 Mobile Advertising Inventory	123
i. Text Messaging (SMS).....	123
a. SMS Advertising Creative Technical Specifications.....	123
b. SMS Ad Units.....	123
ii. SMS Ad Functionality.....	124
iii. MMS	124
a. MMS Advertising Creative Technical Specifications	124
b. MMS Ad Units	124
iv. Mobile Web.....	125
a. Mobile Web Advertising Creative Technical Specifications	125
b. Mobile Web Ad Units.....	125
4.4.4 Delivery Mediums	125
i. CSC (Common Short Code).....	125
ii. MMS	125
iii. SMS.....	125
iv. Viral Marketing.....	125
v. Profile: Mobile Marketing Association (MAA).....	126
a. Mobile Marketing	126
b. Adoption	127
4.4.5 Mobile Ad-Funded Messaging Tariffs	128
i. Adoption	128
Figure 4.8: Out There Media – Number of Mobile Ad Campaigns	128
ii. Challenges & Drivers.....	128
Figure 4.9: Most Active Mobile Advertisers	129
iii. Company Profile: Amobee	129
a. Company Background.....	129
b. Products and Services.....	130
Table 4.2: Amobee Ad Pricing (West Europe & North America)	130
Figure 4.10: Amobee’s Unified Platform For Ad Management.....	131
c. Case Study: Orange Pilots In-SMS Ads Concept	131
Figure 4.11: P2P SMS On-Net Traffic Interception.....	132
d. Case Study: Frog2Frog Partnership for Mobile Messaging Advertising.....	132
e. Case Study: Vodafone Czech Republic Launches Mobile Advertising.....	132
Figure 4.12: SMS Gratis Message Flow & Ad Insertion	133
iv. Company Profile: Blyk	133
a. Company Background.....	133
b. Products and Services.....	134

5. Mobile Messaging Forecasts

5.1 Forecast Definitions & Methodology.....	136
5.1.1 Forecast Definitions	136
5.1.2 Forecast Methodology	137
Figure 5.1: Forecast Methodology	137
5.2 The Global Market for Mobile Messaging	138

5.2.1 Total Global Revenues For Mobile Messaging	138
Figure 5.2: Total Global Revenues for Mobile Messaging (\$m), Split by 8 Key Regions 2007-2014.....	138
Table 5.1: Total Global Revenues for Mobile Messaging (\$m), Split by 8 Key Regions 2009-2014	139
Figure 5.3: Total Global Revenues for Mobile Messaging, Split by Product (SMS, MMS, IM, Email) (\$m) 2007-2014.....	139
Table 5.2: Total Global Revenues for Mobile Messaging, Split by Product (SMS, MMS, IM, Email) (\$m) 2009-2014	140
5.3 SMS	140
5.3.1 SMS Subscribers.....	140
Figure 5.4: Number of Mobile Subscribers Using SMS (m), Split by 8 Key Regions 2009-2014	140
Table 5.3: Number of Mobile Subscribers Using SMS (m), Split by 8 Key Regions 2009-2014.....	141
5.3.2 SMS Volumes.....	141
Figure 5.5: Total Annual SMS Volume (m), Split by 8 Key Regions 2007-2014.....	141
Table 5.4: Total Annual SMS Volume (m), Split by 8 Key Regions 2009-2014.....	142
5.3.3 Volume of Paid-for SMS Messages	142
Figure 5.6: Total Volume of Paid-for SMS Messages (m), Split by 8 Key Regions 2007-2014 ..	142
Table 5.5: Total Volume of Paid-for SMS Messages (m), Split by 8 Key Regions 2009-2014 ...	143
5.3.4 Operator Billed SMS Revenues	143
Figure 5.7: Total Operator Billed SMS Revenues (\$m), Split by 8 Key Regions 2007-2014.....	143
Table 5.6: Total Operator Billed SMS Revenues (\$m), Split by 8 Key Regions 2009-2014.....	144
5.3.5 SMS Based Advertising Revenues.....	144
Figure 5.8: SMS Based Advertising Revenues (\$m), Split by 8 Key Regions 2007-2014.....	144
Table 5.7: SMS Based Advertising Revenues (\$m), Split by 8 Key Regions 2009-2014.....	145
5.4 MMS	145
5.4.1. MMS Subscribers	145
Figure 5.9: Number of Mobile Subscribers Using MMS (m), Split by 8 Key Regions 2007-2014	145
Table 5.8: Number of Mobile Subscribers Using MMS (m), Split by 8 Key Regions 2009-2014	146
5.4.2. Volumes of Paid-for MMS Messages.....	146
Figure 5.10: Total Volume of Paid-for MMS (bn), Split by 8 Key Regions 2007-2014	146
Table 5.9: Total Volume of Paid-for MMS (bn), Split by 8 Key Regions 2009-2014.....	147
5.4.3. Operator-billed MMs Revenues	147
Figure 5.11: Total Operator-Billed MMS Revenues (\$m), Split by 8 Key Regions 2007-2014 ..	147
Table 5.10: Total Operator-Billed MMS Revenues (\$m), Split by 8 Key Regions 2009-2014 ..	148
5.4.4 Total Ad-funded MMS Volumes	148
Figure 5.12: Total Ad-funded MMS Traffic (m), Split by 8 Key Regions 2007-2014.....	148
Table 5.11: Total Ad-funded MMS Traffic (m), Split by 8 Key Regions 2009-2014.....	149
5.4.5 MMS Based Advertising Revenues	149
Figure 5.13: MMS Based Advertising Revenues (\$m), Split by 8 Key Regions 2007-2014	149
Table 5.12: MMS Based Advertising Revenues (\$m), Split by 8 Key Regions 2009-2014	150
5.5 Mobile Email.....	150
5.5.1 Subscribers Using Mobile Email.....	150
Figure 5.14: Number of Mobile Subscribers Using Email (m), Split by 8 Key Regions 2007-2014	151
Table 5.13: Number of Mobile Subscribers Using Email (m), Split by 8 Key Regions 2009-2014	151
5.5.2 Total Operator-billed Email Revenues	151
Figure 5.15: Total Operator-Billed Email Revenues (\$m), Split by 8 Key Regions 2007-2014 ..	152
Table 5.14: Total Operator-Billed Email Revenues (\$m), Split by 8 Key Regions 2009-2014 ..	152
5.6 Mobile IM.....	152
5.6.1 Subscribers Using Mobile IM.....	152
Figure 5.16: Number of Mobile IM Users (m), Split by 8 Key Regions 2007-2014	153
Table 5.15: Number of Mobile IM Users (m), Split by 8 Key Regions 2009-2014.....	153
5.6.2 Users Paying for Mobile IM	153
Figure 5.17: Number of Users Paying for Mobile IM (m), Split by 8 Key Regions 2007-2014 ..	154

Table 5.16: Number of Users Paying for Mobile IM (m), Split by 8 Key Regions 2009-2014.. 154

5.6.3 Operator-billed IM Revenues..... 154

Figure 5.18: Total Operator-Billed IM Revenues (\$m), Split by 8 Key Regions 2007-2014..... 155

Table 5.17: Total Operator-Billed IM Revenues (\$m), Split by 8 Key Regions 2009-2014..... 155

5.6.4 Number of Ad-funded Mobile IM Subscribers 155

Figure 5.19: Total Number of Ad-funded Mobile IM Subscribers (m), Split by 8 Key Regions 2007-2014..... 156

Table 5.18: Total Number of Ad-funded Mobile IM Subscribers (m), Split by 8 Key Regions 2009-2014..... 156

Figure 5.20: Total Value of Mobile IM Ad-Spend (\$m), Split by 8 Key Regions 2007-2014..... 157

Table 5.19: Total Value of Mobile IM Ad-Spend (\$m), Split by 8 Key Regions 2009-2014..... 157

6. Strategies

6.1 Introduction 158

6.2 Aggregators & Hubs..... 158

i. NeuStar 158

a. Company Background..... 159

Table 6.1: NeuStar Revenue and Net Income Growth 2003-2008 (\$m) 159

b. Products and Services..... 159

Figure 6.1: NeuStar ICP Overview..... 160

c. Strategy 160

ii. Sybase 365 161

a. Company Background..... 161

Table 6.2: Sybase KPIs 2004-2008 161

b. Products and Services..... 161

Table 6.3: Sybase Messaging KPIs 2008 vs. 2007 162

c. Strategy 162

iii. Syniverse Technologies 163

a. Company Background..... 163

b. Products and Services..... 163

Figure 6.2: The NEXT Advanced Messaging Hub 163

Figure 6.3: Syniverse Revenue Growth 2003-2007 (\$m) 164

iv. VeriSign..... 164

a. Company Background..... 164

b. Products and Services..... 165

c. Strategy 165

Table 6.4: VeriSign Estimated Revenues Generated for Customers in Q1 2007-Q4 2008..... 166

6.3 ASP/ISV 166

i. Danger 166

a. Company Background..... 166

b. Products and Services..... 167

Figure 6.4: T-Mobile’s Sidekick Slide..... 167

ii. MSN & Windows Live for Windows Mobile..... 167

a. Company Background..... 167

b. Products and Services..... 168

c. Strategy 168

iii. MXit 169

a. Company Background..... 169

b. Products and Services..... 169

c. Strategy 169

iv. IXI Mobile & Ogo..... 170

a. Company Background..... 170

b. Products and Services..... 170

Figure 6.5: Ogo Devices for Messaging and Web 2.0 170

c. Strategy 171

v. Tencent QQ..... 171

a. Company Background..... 171

- b. Strategy 172
- 6.4 Brands & Ad Networks 172**
 - i. Fox Mobile Group 172
 - a. Company Background 172
 - b. Products and Services 173
 - ii. Out There Media 173
 - a. Company Background 173
 - b. Products and Services 173
 - Figure 6.6: Mobucks Mobile Advertising Marketplace Value Chain 174
 - c. Case Study: Tomato Plus! 175
 - Figure 6.7: Tomato Plus!/Blyk Subscriber Growth 175
- 6.5 MNOs 175**
 - i. MTN (South Africa) & noknok 175
 - a. Company Background 175
 - b. Strategy 176
 - ii. O2 UK & Bluebook 177
 - a. Company Background 177
 - b. Strategy 177
 - Table 6.5: O2 UK – Typical Messaging Costs 178
 - Table 6.6: O2 UK KPIs Q1 2008 to Q4 2008 179
- 6.6 Vendors 179**
 - i. Miyowa 179
 - a. Company Background 179
 - b. Products and Services 179
 - Figure 6.8: Miyowa Move Multimedia Platform Architecture 180
 - c. Strategy 180
 - ii. Nokia 181
 - a. Company Background 181
 - Table 6.7: Nokia KPIs – 2008 versus 2007 182
 - b. Products and Services 182
 - c. Strategy 183
 - e. Devices & Services 183
 - Figure 6.9: Nokia’s E66 184
 - iii. Cloudmark 184
 - a. Company Background 184
 - b. Products and Services 184
 - Figure 6.10: Cloudmark Technology and Global Threat Network 185

7. American & European Markets

- 7.1 North America 186**
 - 7.1.1 AT&T (US) 186
 - Table 7.1: AT&T KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008 187
 - Table 7.2: AT&T – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Voicemail) 187
 - 7.1.2 Helio (US) 187
 - Figure 7.1: Helio’s Ocean Device 188
 - Table 7.3: Helio ‘A La Carte’ – Typical Messaging Costs per Message (SMS, MMS, Email, IM & VVO) 188
 - 7.1.3 Rogers Wireless (Canada) 189
 - Table 7.4: Rogers Wireless Text Messaging Bundles 189
 - Table 7.5: Rogers Wireless KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008 .. 190
 - 7.1.4 Virgin Mobile USA 190
 - Table 7.6: Virgin Mobile USA KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008 191
 - Table 7.7: Virgin Mobile USA – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Video) 191

7.2 South America	192
7.2.1 America Movil.....	192
Table 7.8: America Movil KPIs (Revenues & Subscriptions) Q4 2007 to Q4 2008.....	192
i. Mexico (Telcel).....	192
Table 7.9: Telcel KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	193
Table 7.10: Telcel – Typical Messaging Costs per Message (SMS, MMS, Web to SMS, Mobile Data & Voicemail).....	193
ii. Argentina, Paraguay and Uruguay (Claro).....	193
Table 7.11: Claro (Argentina, Paraguay & Uruguay) KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	193
Table 7.12: Claro (Argentina) – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Voice Messaging).....	194
iii. Brazil (Claro).....	194
iv. Chile (Claro).....	194
v. Colombia (CoMCEL).....	194
vi. Ecuador (Porta).....	195
vii. Peru (Claro).....	195
viii. Central America (Claro).....	195
ix. Caribbean (Claro).....	195
x. United States (TRACFONE).....	195
7.2.2 ENTEL (Chile).....	195
Table 7.13: Entel PCS KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	196
Table 7.14: ENTEL – Typical Messaging Costs per Message (SMS, MMS, Email, Mobile Data, IM & SMS Messenger).....	196
7.2.3 Telefónica LatinoAmérica.....	196
Table 7.15: Telefónica LatinoAmérica KPIs (Revenues & Subscriptions) Q4 2007 to Q4 2008.....	197
i. Telefónica Móviles Chile (Movistar).....	197
Table 7.16: Telefonica Moviles Chile KPIs (Revenues & Subscriptions) Q4 2007 to Q4 2008.....	197
Table 7.17: Telefonica Chile – Typical Messaging Costs per Message (SMS, MMS, Email, IM, Mobile Data, Voicemail & Voice Messaging).....	198
ii. Vivo (Brazil).....	198
Table 7.18: Vivo KPIs (Revenues, Subscriptions, ARPU & Market Share) Q4 2007 to Q4 2008.....	198
Table 7.19: Vivo – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Data)..	199
7.3 Western Europe	199
7.3.1 Vodafone.....	199
Table 7.20: Vodafone Group KPIs (Revenues & Subscriptions) for Six Months Ended September 30, 2008.....	200
Table 7.21: Vodafone Group (Europe) KPIs (Revenues & Subscriptions) for Six Months Ended September 30, 2008.....	200
Table 7.22: Vodafone Group (Rest of World) KPIs (Revenues & Subscriptions) for Six Months Ended September 30, 2008.....	201
i. Vodafone Germany.....	201
Table 7.23: Vodafone Germany – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Visual Mailbox).....	202
ii. Portugal.....	202
Table 7.24: Vodafone Portugal – Typical Messaging Costs per Message (SMS, MMS, Email & IM).....	203
iii. Spain.....	203
iv. UK.....	203
7.3.2 Telefónica Móviles España SA (Telefonica Movistar – Spain).....	203
Table 7.25: Telefónica Móviles España KPIs (Revenues & Subscriptions) Q4 2007 to Q4 2008.....	204
Figure 7.2: Telefónica Móviles España Mobile IM Screenshot.....	204
Table 7.26: Telefonica Movistar (Spain) – Typical Messaging Costs per Message (SMS, MMS, Email, & IM).....	205
7.3.3 Telefónica Europe.....	205
i. Telefónica O2 UK.....	205
Table 7.27: Telefónica UK KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008....	206

Table 7.28: O2 UK – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Voicemail)	206
ii. Telefónica O2 Germany	206
Table 7.29: Telefónica O2 Germany KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	206
iii. Telefónica O2 Ireland	206
Table 7.30: Telefónica O2 Ireland KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	207
iv. Telefónica O2 Czech Republic	207
Table 7.31: Telefónica O2 Czech Republic KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008.....	207
Table 7.32: Telefónica O2 Czech Republic – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Voicemail)	208
7.4 Eastern Europe	208
7.4.1 mobilkom austria group	208
Table 7.33: mobilkom austria group KPIs (Revenues, Operating Income & Subscriptions) Q4 2008 and Q4 2007 y-o-y Comparison	209
i. mobilkom austria	209
Table 7.34: mobilkom austria KPIs (Revenues, Subscriptions & ARPU) Q4 2008 and Q4 2007 y-o-y Comparison.....	209
Table 7.35: mobilkom austria – Typical Messaging Costs per Message (SMS, MMS, Email & IM)	210
ii. Vipnet	210
Table 7.36: Vipnet KPIs (Revenues, Operating Income, Subscriptions, ARPU & Market Share) Q4 2008 and y-o-y Comparison	210
Table 7.37: Vipnet – Typical Messaging Costs per Message (SMS, MMS, Email, Data & Voicemail)	211
7.4.2 VimpelCom Group – Beeline (Russia & CIS)	211
Table 7.38: VimpelCom Mobile KPIs (Revenues, Subscriptions, ARPU & Market Share) (Russia) Q3 2007 to Q3 2008.....	211
Table 7.39: VimpelCom (Russia – Moscow) – Typical Messaging Costs per Message (SMS, MMS, IM & Voice Messaging)	212
7.4.3 Turkcell.....	212
Table 7.40: Turkcell KPIs (Revenues, Subscriptions & ARPU) Q3 2007, Q2 2008, Q3 2008, Q4 2008	213
Table 7.41: Turkcell – Typical Messaging Costs per Message (SMS, MMS, Email, IM & Voice SMS)	214

8. Asian & African Markets

8.1 China & Far East.....	216
8.1.1 China Mobile	216
Table 8.1: China Mobile KPIs (Revenues, Subscriptions, ARPU & Traffic), 2007-2008.....	216
Table 8.2: China Mobile – Typical Messaging Costs per Message (SMS, MMS, GPRS, Email, IM, Voice & PIM)	217
8.1.2 China Unicom	217
Table 8.3: China Unicom (GSM) KPIs (Revenues, Subscriptions & ARPU), 2007-2008	218
Table 8.4: China Unicom – Typical Messaging Costs per Message (SMS & MMS)	218
8.1.3 NTT DoCoMo (Japan)	218
Figure 8.1: Aggregate ARPU by Japanese Operator.....	219
Figure 8.2: Packet ARPU by Japanese Operator	219
Table 8.5: NTT DoCoMo Wireless KPIs (Revenues, Subscriptions, ARPU & Market Share) Q3 2007 (December 2007) to Q3 2008 (December 2008).....	220
Table 8.6: NTT DoCoMo – Typical Messaging Costs per Message (SMS, Email, Mobile Data & Chaku-moji).....	221
8.1.4 KTF (South Korea).....	221
Table 8.7: KTF KPIs (Revenues, Subscriptions, ARPU, Data Usage & Messaging) Q4 2007 to Q4 2008	221

Table 8.8: KTF – Typical Messaging Costs per Message (SMS, MMS, Email, & Mobile Data)	222
8.2 Indian Sub Continent	222
8.2.1 Bharti Airtel	222
Table 8.9: Bharti Airtel KPIs (Revenues, Subscriptions, ARPU & Market Share) Q4 2007 to Q4 2008	223
Table 8.10: Bharti Airtel – Typical Messaging Costs per Message (SMS, MMS, Email, IM, & Voice)	224
8.2.2 Reliance Mobile	224
Table 8.11: Reliance Mobile KPIs (Revenues, Subscriptions, ARPU & Market Share) December 2007 to December 2008	224
Table 8.12: Reliance Mobile – Typical Messaging Costs per Message (SMS, MMS, Email, Alerts, IM, Talking Message & Voicemail)	225
8.2.3 Telenor Pakistan	225
Table 8.13: Telenor Pakistan KPIs (Revenues, Subscriptions & ARPU) Q4 2007 to Q4 2008	226
Table 8.14: Telenor Pakistan Data Packages	226
Table 8.15: ‘SMS fulltime’ Tariffs	227
Table 8.16: Telenor Pakistan – Typical Messaging Costs per Message (SMS, MMS, Alerts, Email, Bubble Message & Backup)	227
8.3 Rest of Asia	228
8.3.1 3 (Australia)	228
Table 8.17: 3 (Australia) KPIs (Revenues, Subscriptions & ARPU) Half Year and y-o-y Comparison	228
Table 8.18: 3 (Australia) – Typical Messaging Costs per Message (SMS, Email, Mobile Data, IM, Video & Voicemail)	229
8.3.2 DiGi (Malaysia)	229
Table 8.19: DiGi KPIs (Revenues, Subscriptions, Mobile Data & ARPU) Q4 2007 to Q4 2008	230
Table 8.20: DiGi – Typical Messaging Costs per Message (SMS, MMS, Email, IM, BubbleTalk & Mobile Data)	231
8.3.3 Globe Telecom (Philippines)	231
Table 8.21: Globe KPIs (Revenues, Subscriptions, Mobile Data & ARPU), 2007-2008	232
Table 8.22: Globe – Typical Messaging Costs per Message (SMS, MMS, Email, Mobile Data & IM)	232
8.3.4 Telstra Mobile (Australia)	233
Table 8.23: Telstra (Australia) KPIs ((Revenues, Subscribers & ARPU) Full Year Results and y-o-y Comparison	233
Table 8.24: Telstra – Typical Messaging Costs per Message (SMS, MMS, Email, & IM)	234
8.4 Africa & Middle East	234
8.4.1 etisalat	234
Table 8.25: Etisalat – Typical Messaging Costs per Message (SMS, MMS, Email & Data)	235
8.4.2 Vodacom (South Africa)	235
Table 8.26: Vodacom KPIs (Revenues, Subscriptions, ARPU & Market Share) Six Months Ended September 30 2008 and y-o-y Comparison	236
i. Mobile Email	236
a. Mobile IM	236
ii. SVS (Short Voice Service)	237
iii. Voicemail2SMS	237
Table 8.27: Vodacom South Africa – Typical Messaging Costs per Message (SMS, MMS, Email, IM, Voicemail & SVS)	237
8.4.3 Zain	237
Table 8.28: Zain Group KPIs (Revenues & Subscriptions), 2007-2008	238
i. Jordan	238
Table 8.29: Zain (Jordan) KPIs (Revenues, Subscriptions, ARPU & Market Share), 2007-2008	238
Table 8.30: Zain (Jordan) – Typical Messaging Costs per Message (SMS, MMS, Email & Mobile Data)	239
ii. Kenya	239

Table 8.31: Zain (Kenya) KPIs (Revenues, Subscriptions, ARPU & Market Share), 2007-2008	239
Table 8.32: Zain (Kenya) – Typical Messaging Costs per Message (SMS, MMS, Email & Mobile Data)	239
iii. Nigeria	240
Table 8.33: Zain (Nigeria) KPIs (Revenues, Subscriptions, ARPU & Market Share), 2007-2008	240
Table 8.34: Zain (Nigeria) – Typical Messaging Costs per Message (SMS, MMS, Email & Mobile Data)	240
iv. Uganda	240
Table 8.35: Zain (Uganda) – KPIs (Revenues, Subscriptions, ARPU & Market Share), 2007-2008	241
Table 8.36: Zain (Uganda) – Typical Messaging Costs per Message (SMS & Voicemail)	241

9. Mobile Messaging Value Added Services

9.1 Introduction	242
9.2 Voice	242
9.2.1 Voice Messaging/Voice SMS	243
i. Background	243
ii. Adoption	243
iii. Commercial Options	243
9.2.2 Voice Messaging Providers	244
i. Bubble Motion	244
a. Company Background	244
b. Products and Services	244
c. Strategy	244
Figure 9.1: BubbleTALK Deployment Options	245
ii. Kirusa	245
a. Company Background	245
b. Products and Services	245
iii. SpinVox	246
a. Company Background	246
b. Products and Services	246
c. Strategy	247
9.2.3 Visual Voicemail	248
i. Background	248
Figure 9.2: Visual Voicemail User Interface	248
ii. Adoption	249
Figure 9.3: Visual Voicemail Delivered to TV Screen	249
iii. Company Profile: Comverse	249
a. Company Background	250
b. Products and Services	250
9.3 Video	251
9.3.1 Videomail	251
i. Background	251
ii. Adoption	251
iii. Commercial Options	252
a. Video Colour Ring Back Tones	252
b. Video Caller ID	252
iv. Company Profile: Dialogic	253
a. Company Background	253
b. Products and Services	253
Figure 9.4: Dialogic's Portfolio	253
9.4 Other	254
9.4.1 Address Book	254
i. Address Book & Presence	254
ii. Address Book 'Favourites' List	254

Figure 9.5: On-Device Client Providing Converged Favourites List	255
iii. Network Backup & Storage	255
iv. Company Profile: NewBay Software.....	256
a. Company Background.....	256
b. Products and Services.....	256
Figure 9.6: NewBay's LifeCache 'Model for Innovation and Delivery'	257
9.4.2 Media Translation	257
9.4.3 PIM.....	258

10. Mobile Messaging, Convergence & IP

10.1 Introduction	260
10.2 Convergence and IP	260
10.2.1 Legacy Mobile Infrastructures.....	261
i. Circuit-Switching vs. Packet Switching	261
ii. SS7 Signalling.....	261
iii. IN (Intelligent Network).....	262
10.2.2 Paths to IP	262
i. Migration Drivers.....	262
Figure 10.1: An IP-Based Messaging Architecture.....	263
ii. IP Efficiencies	263
iii. Messaging 2.0.....	263
iv. IMS & SDP	264
10.2.3 Vendor Profiles	264
i. Airwide Solutions.....	264
a. Company Background.....	264
b. Products and Services.....	265
Figure 10.2: Airwide Solutions' Fusion – A Next-Generation Messaging Architecture.....	266
ii. Bharti Telesoft	266
a. Company Background.....	266
b. Products and Services.....	266
c. Strategy	267
iii. Ericsson	267
a. Company Background.....	267
b. Products and Services.....	267
iv. Nokia Siemens Networks	268
a. Company Background.....	268
Table 10.1: Nokia Siemens Networks – Revenue and Net Income Growth 2007-2008 (\$m)	268
b. Products and Services.....	268
c. Strategy	269
10.3 Converging Communities	270
10.3.1 Social Media & Web 2.0	270
Figure 10.3: Social Networking On Mobile	271
i. In Mail & Public Messaging.....	271
ii. Facebook.....	272
a. Company Background.....	272
b. Services and Products – Fixed Internet.....	272
c. Mobile Services.....	273
iii. MySpace.....	273
a. Company Background.....	273
b. Products and Services.....	274
- MySpace Mobile.....	274
iv. Twitter.....	275
10.3.2 IM and the Interactive Communication Landscape	275
Figure 10.4: The Interactive Communication Market	276
i. Bots.....	276
ii. Company Profile: Colibria.....	277

- a. Company Background277
- b. Products and Services277
- Figure 10.5: The Colibria Elevate Platform278
- c. Strategy.....278
- 10.3.3 Messaging to Blend Fixed & Mobile Web?.....279
- 10.3.4 VoIP Communities.....279
- i. Company Profile: fring.....280
 - a. Company Background280
 - b. Products and Services280
 - Figure 10.6: The fring Value Chain.....280
 - c. Strategy.....281
 - d. Case Study: mobilkom’s AI & fring.....281
 - Figure 10.7: The fring Mobile Client.....282
- ii. Company Profile: Skype.....282
 - a. Company Background282
 - b. Products and Services283
- iii. Company Profile: Vyke283
 - a. Company Background283
 - b. Products and Services284
 - c. Strategy.....284

11. Industry Bodies and Developments

- 11.1 Introduction286**
- 11.2 Industry Bodies286**
 - 11.2.1 3GPP.....286
 - i. IP-Multimedia Subsystem (IMS).....287
 - Figure 11.1: IMS Architecture Overview.....287
 - ii. MMTel.....287
 - Figure 11.2: MMTEL Interworking Overview288
 - 11.2.2 Fixed-Mobile Convergence Alliance.....288
 - Figure 11.3: FMCA Objectives.....289
 - 11.2.3 GSM Association (GSMA)289
 - i. IP Interworking.....290
 - a. GRX290
 - Figure 11.4: The GRX Architecture.....290
 - b. IPX.....291
 - Figure 11.5: The IPX Architecture.....291
 - ii. Open Connectivity Programme.....291
 - a. SMS Hubbing.....292
 - iii. PathFinder292
 - iv. Voice Messaging Service Definition.....292
 - Table 11.1: Voice Messaging Functions292
 - Figure 11.6: Distributed Interworking Method for Voice Messaging Service293
 - 10.2.4 Open Mobile Terminal Platform (OMTP).....294
 - Figure 11.7: OMTP Focus294
 - i. BONDI Initiative295
 - 11.2.5 RTT Alliance.....295
- 11.3 Wireless Web Developments295**
 - 11.3.1 IETF (Internet Engineering Task Force).....295
 - i. ENUM296
 - ii. LEMONADE (licence to enhanced mobile oriented and diverse endpoints)296
 - iii. Real-Time Text over IP (ToIP)296
 - iv. SIP (Session Initiation Protocol)296
 - v. SIP-SIMPLE (SIP for Instant Messaging and Presence Leveraging Extensions)297
 - a. Optimisations297
 - b. Instant Messaging.....297
 - c. IM Chat Rooms.....297

- d. IM Features 297
- vi. XMPP (Extensible Messaging and Presence Protocol) 297
- 11.3.2 XMPP Standards Foundation (XSF) 298
- 11.3.3 OMA (WAP 2.0 & IMPS v.1.3)..... 298
 - i. Converged IP Messaging (CPM) 298
 - Figure 11.8: Converged IP Messaging..... 299
 - ii. OMA Browsing 299
 - iii. OMA-CP (Client Provisioning)..... 299
 - iv. OMA-EMN (Email Notification)..... 299
 - v. OMA MEM (Mobile E-Mail)..... 299
 - vi. OMA MMS 1.3 300
 - vii. OMA Presence SIMPLE V2.0 300
 - viii. OMA Push V2.2 300
 - ix. OMA SIMPLE IM V1.0 300
 - a. Deferred Messaging..... 300
 - x. WAP 2.0 300
 - a. WAE (Wireless Application Environment) 300
 - b. Introduction of Internet Protocols 300
 - c. WAP Programming Model..... 301
 - d. Enhanced Services 301
 - xi. IMPS V.1.3 (Instant Messaging and Presence Service) 301
 - Figure 11.9: OMA’s IMPS Architecture 302
 - xii. OMA DS (Data Synchronization) 302
 - xiii. XDM 302
- 11.3.4 Web Services..... 302
 - i. REST (REpresentational State Transfer)..... 302
 - ii. SOAP (Simple Object Access Protocol) 303
- 11.3.5 W3C and the Mobile Web Initiative (MWI)..... 303

Appendix: Mobile Messaging Technologies

- 1 Introduction 304**
- 2 Core P2P Mobile Messaging Services..... 304**
 - 2.1 SMS (Short Message Service)..... 304
 - i. SMS Architecture 305
 - Figure A1: SMS Architecture 306
 - ii. SMS Standards & Protocols..... 306
 - iii. SMS Interworking 306
 - 2.2 Enhanced Messaging – EMS & RCS..... 306
 - i. Rich Communication Suite (RCS) Initiative 307
 - Figure A2: The Objectives of RCS 307
 - 2.3 MMS 307
 - i. MMS Architecture..... 308
 - Figure A3: MMS Architecture..... 308
 - Table A1: Supporting non-MMS Phone Access 309
 - ii. MMS Standards & Protocols 309
 - iii. MMS Interworking 309
 - Figure A4: The SMTP Design Structure 310
 - 2.4 Mobile Email 310
 - Figure A5: Email Architecture 310
 - Table A2: Common Email Approaches..... 311
 - i. Mobile Email Architectures 311
 - Figure A6: Pull and Push Technology 312
 - ii. Mobile Email Standards 312
 - 2.5 Mobile IM & Presence 312
 - i. Mobile IM (Web-Based)..... 312
 - ii. SMS+/SMS 2.0/Super SMS (On-Net) 312
 - 2.6 Messaging Gateway and Routers 313
 - i. Messaging Gateways 313

Figure A7: Messaging Gateway Architecture.....	314
ii. SMS Router	314