

FMC and Convergence Service Strategies: The evolution of the value proposition

3rd Edition

©2009 Informa UK Ltd.

All rights reserved.

The contents of this publication are protected by international copyright laws, database rights and other intellectual property rights. The owner of these rights is Informa UK Ltd, our affiliates or other third party licensors. All product and company names and logos contained within or appearing on this publication are the trade marks, service marks or trading names of their respective owners, including Informa UK Ltd. This publication may not be:-

- (a) copied or reproduced; or
- (b) lent, resold, hired out or otherwise circulated in any way or form without the prior permission of Informa UK Ltd.

Whilst reasonable efforts have been made to ensure that the information and content of this publication was correct as at the date of first publication, neither Informa UK Ltd nor any person engaged or employed by Informa UK Ltd accepts any liability for any errors, omissions or other inaccuracies. Readers should independently verify any facts and figures as no liability can be accepted in this regard - readers assume full responsibility and risk accordingly for their use of such information and content.

Any views and/or opinions expressed in this publication by individual authors or contributors are their personal views and/or opinions and do not necessarily reflect the views and/or opinions of Informa UK Ltd.

AUTHOR

Paul Merry

FORECASTERS

Gareth Sims

REPORT STAFF

Kris Szaniawski, *Research Manager*

Olivia Gibney, *Reports Managing Editor*

Maria Mitchell, *Reports Production Manager*

Shalia Mughal, *Reports Production Editor*

HEAD OFFICE

Mortimer House

37-41 Mortimer Street

London W1T 3JH

Web site: www.informamedia.com

SALES & CUSTOMER SERVICE

UK/Europe

Phone: (44) 20 7017 5533

Fax: (44) 20 7017 4783

Email: telecoms.enquiries@informa.com

North America

Phone: (1) 978 258 2500

Fax: (1) 20 978 258 2500

Email: colleen.barron@informa.com

Published in January 2009

ISBN: 978 1843 118 015

ABOUT THE AUTHOR

Paul Merry is a Senior Research Analyst with Informa Telecoms & Media with 10 years of research analysis experience. Paul has lead authored several reports across the Informa Telecoms & Media portfolios including MVNO Strategies, Mobile Entertainment, Mobile Transactions in Europe and Global Mobile Prepaid Strategies.

During his time as a research analyst, Paul has authored and co-authored several strategic reports on the subjects of telecommunications, the Internet, Metropolitan Area Networks, billing and CRM and has undertaken a range of consultancy projects including the evaluation of business strategies, market potential of new technologies and economic modelling. He has also presented findings to top-level executives at events throughout the world. Paul holds Bsc from Bristol University.

Contents

CHAPTER 1	1
EXECUTIVE SUMMARY	1
Market status	1
Defining the parameters of convergence and FMC	1
FMC players' convergence strategies	1
Pure mobile operators	1
Integrated or hybrid operators	2
Pure fixed operators	4
Cable operators	4
Other players	5
Forecasts	6
General assumptions	6
Total FMC subscriber forecasts	6
<i>Figure 1.1: Global: total combined FMC subscribers, 2008-2013</i>	7
Device-based FMC subscriber forecasts	7
<i>Figure 1.2: Global: FMC device-based subscribers, 2008-2013</i>	7
<i>Figure 1.3: Global: FMC device-based subscribers, by usage of voice only and voice and data, 2008-2013</i>	8
<i>Figure 1.4: Global: FMC device-based subscribers, by consumer/enterprise segments and by voice only/voice and data usage, 2008-2013</i>	9
Femtocell FMC subscriber forecasts	9
<i>Figure 1.5: Global: femtocell FMC subscribers, by network technology generation, 2009-2013</i>	10
CHAPTER 2	11
STRATEGIC APPROACHES	11
FMC: an idea in waiting	11
Market developments	11
Defining convergence in the context of FMC	13
End users and convergence	13
The origins of the concept of convergence and its use	13
<i>Figure 2.1: End-user impetus for convergence</i>	14
Convergence in the context of telecommunications	15
<i>Figure 2.2: Telecommunications convergence</i>	15
Fixed mobile convergence	15
<i>Figure 2.3: FMC in context</i>	16
<i>Figure 2.4: Convergence roadmap from an FMC perspective</i>	17
<i>Figure 2.5: FMC defining attributes</i>	18
FMC player strategies	19
Pure mobile operators	19
Integrated or hybrid operators	20
Pure fixed operators	21
Cable operators	22
Other players	22
VoIP alternative service providers	22
Device manufacturers	23

CHAPTER 3	25
BUSINESS OPPORTUNITIES AND CHALLENGES	25
Major opportunities and challenges of FMC	25
Data traffic offloading	25
<i>Figure 3.1: General improvements offered by femtocells</i>	26
<i>Figure 3.2: Femtocell barriers to deployment</i>	27
VoIP	28
Handset and device developments	29
<i>Figure 3.3: Selected Wi-Fi enabled devices</i>	30
Opportunities and threats: service providers	31
Pure mobile operators	31
<i>Figure 3.4: Pure mobile operators: convergence opportunities and threats</i>	31
Tier 2 and 3 pure mobile operators	32
Pure fixed operators	32
<i>Figure 3.5: Pure fixed operators: convergence opportunities and threats</i>	32
Integrated/hybrid operators	33
<i>Figure 3.6: Integrated/hybrid operators: convergence opportunities and threats</i>	33
Cable/broadband operators	34
<i>Figure 3.7: Cable/broadband operators: convergence opportunities and threats</i>	34
Alternative operators	35
<i>Figure 3.8: Alternative operators: convergence opportunities and threats</i>	36
Opportunities and threats: convergent service enablers	37
Device and network manufacturers	37
<i>Figure 3.9: Device and network manufacturers: convergence opportunities and threats</i>	37
Software application and hardware vendors	37
<i>Figure 3.10: Software application and hardware vendors: convergence opportunities and threats</i>	38
CHAPTER 4	39
PRICING AND BUNDLING STRATEGIES	39
Pricing and service bundling	39
Fixed pricing anomalies	39
Pricing as an incentive to take up FMC	39
Customer perception of bundling and 'bucket' plans	40
Handset price points	40
Convergence, mobile handset segmentation and pricing	40
Alternative pricing strategies	41
Advertising and subsidizing	41
Mobile operators' resistance to advertising-based solutions	42
Privacy issues	43
FMC and backhaul	44
Quantifying backhaul costs	44
Next-generation networks	45
CHAPTER 5	47
NEW FMC SERVICE PROVIDERS	47
<i>Figure 5.1: Selected virtual service providers</i>	47
Truphone	49
Company background	49
<i>Figure 5.2: Selected Truphone investors, August 2008</i>	49

Service offering	49
Market focus	50
Device strategy	50
Pricing strategy and customer support	51
Analysis	51
Rebtel	54
Company background	54
Service offering	54
<i>Figure 5.3: Rebtel free call process</i>	55
Market focus	55
Device strategy	55
Pricing strategy and customer support	56
Analysis	56
HelloSoft	58
Company background	58
Service offering	58
<i>Figure 5.4: Selected HelloSoft VoIP products</i>	59
Market focus	59
Pricing strategy and customer support	59
Analysis	60
 CHAPTER 6	 61
CONVERGENT SERVICE ENABLERS	61
<i>Figure 6.1: Selected convergent service enablers</i>	61
Radio access network provider: Ubiquisys	63
Company background	63
Service offering	64
Market focus	64
Pricing strategy and customer support	65
Analysis	65
Handset vendor: Nokia	67
Company background	67
Service offering	67
<i>Figure 6.2: Selected Nokia dual-mode devices (Aug-08)</i>	68
Market focus	69
Pricing strategy and customer support	70
Analysis	70
Network service provider: Alcatel-Lucent	72
Company background	72
Service offering	72
<i>Figure 6.3: Alcatel-Lucent IMS/converged services and applications.</i>	72
Market focus	74
<i>Figure 6.4: Alcatel-Lucent organization.</i>	74
Pricing strategy and customer support	74
Analysis	74

CHAPTER 7	77
FMC OPERATORS	77
Operator types	77
<i>Figure 7.1: FMC operator strategies</i>	77
<i>Figure 7.2: Selected FMC operators</i>	78
Fixed operator: Telefonica	79
Company background	79
Service offering	80
Market focus	80
Analysis	80
Pure mobile operator: T-Mobile	81
Company background	81
Service offering	81
Market focus	82
The US	82
<i>Figure 7.3: T-Mobile USA homezone services</i>	82
Europe	82
Analysis	83
Hybrid operator: France Telecom/Unik	83
Company background	83
Service offering	84
Market focus	84
Pricing strategy and customer support	84
<i>Figure 7.4: Orange Unik service options</i>	85
Analysis	85
Broadband/cable operator: Virgin Media	86
Company background	86
Service offering	86
Market focus	87
Pricing strategy and customer support	88
Analysis	88
CHAPTER 8	89
FORECASTS	89
Methodology	89
Definitions	89
Pragmatic approach	89
Device-based FMC subscriber forecast methodology	89
Active device users versus inactive device users	90
<i>Figure 8.1: FMC device-based forecasts methodology flowchart</i>	91
Weighting ratio methodology	91
Femtocell methodology	95
General assumptions	96
Global outlook	97
Global combined UMA, IMS and femtocell FMC subscriber forecasts	99
<i>Figure 8.2: Global: total combined FMC subscribers, 2008-2013</i>	99
Global device-based FMC subscriber forecasts – IMS and UMA	100
<i>Figure 8.3: Global: total FMC device-based subscribers, 2008-2013</i>	100

<i>Figure 8.4: Global: FMC device-based subscribers, by usage of voice only and voice and data, 2008-2013</i>	101
<i>Figure 8.5: Global: FMC device-based subscribers, by consumer/enterprise segments and by voice only/voice and data usage, 2008-2013.</i>	102
Global in-home FMC subscriber forecasts – femtocells	102
<i>Figure 8.6: Global: femtocell subscribers, by network technology generation, 2009-2013</i>	103
Regional analysis	104
Combined UMA, IMS and femtocell FMC subscriber forecasts	104
<i>Figure 8.7: Global: combined FMC subscribers, by region, 2008-2013</i>	104
Device-based (UMA and IMS) FMC subscriber forecasts	105
<i>Figure 8.8: Global: FMC device-based (UMA and IMS) subscribers, by region, 2008-2013</i>	106
<i>Figure 8.9: Global: FMC device-based subscribers, by region and by voice/data usage, 2008-2013</i>	107
In-home (femtocell) FMC subscriber forecasts	108
<i>Figure 8.10: Global: FMC femtocell subscribers, by region, 2009-2013</i>	108
<i>Figure 8.11: Global: femtocell subscribers, by region and by network technology generation, 2009-2013</i>	109
Country analysis	110
The US	110
<i>Figure 8.12: The US: combined FMC subscribers, 2008-2013</i>	110
<i>Figure 8.13: North America: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2008-2013</i>	111
Latin America	112
<i>Figure 8.14: Latin America: combined FMC subscribers, 2009-2013</i>	112
<i>Figure 8.15: Latin America: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	113
Asia Pacific, Developed	114
<i>Figure 8.16: Asia Pacific, Developed: combined FMC subscribers, 2009-2013</i>	114
<i>Figure 8.17: Asia Pacific, Developed: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	115
Asia Pacific, Developing	116
<i>Figure 8.18: Asia Pacific, Developing: combined FMC subscribers, 2009-2013</i>	116
<i>Figure 8.19: Asia Pacific, Developing: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	117
Western Europe	118
<i>Figure 8.20: Western Europe: combined FMC subscribers, 2008-2013</i>	119
<i>Figure 8.21: Western Europe: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2008-2013</i>	120
Eastern Europe	120
<i>Figure 8.22: Eastern Europe: combined FMC subscribers, 2009-2013</i>	120
<i>Figure 8.23: Eastern Europe: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	121
Africa	122
<i>Figure 8.24: Africa: combined FMC subscribers, 2010-2013</i>	122
<i>Figure 8.25: Africa: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2010-2013</i>	123
Middle East	123
<i>Figure 8.26: Middle East: combined FMC subscribers, 2009-2013</i>	123
<i>Figure 8.27: Middle East: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	124

APPENDIX	125
INFORMA TELECOMS & MEDIA FMC INDUSTRY SURVEY 2008	125
Methodology	125
Questionnaire	125
Network rollout section	126
FMC usage section	127
Market overview section	131
Device section	133
Regulatory section	133

AUTHOR

Paul Merry

FORECASTERS

Gareth Sims

REPORT STAFF

Kris Szaniawski, *Research Manager*

Olivia Gibney, *Reports Managing Editor*

Maria Mitchell, *Reports Production Manager*

Shalia Mughal, *Reports Production Editor*

HEAD OFFICE

Mortimer House

37-41 Mortimer Street

London W1T 3JH

Web site: www.informamedia.com

SALES & CUSTOMER SERVICE

UK/Europe

Phone: (44) 20 7017 5533

Fax: (44) 20 7017 4783

Email: telecoms.enquiries@informa.com

North America

Phone: (1) 978 258 2500

Fax: (1) 20 978 258 2500

Email: colleen.barron@informa.com

Published in January 2009

ISBN: 978 1843 118 015

ABOUT THE AUTHOR

Paul Merry is a Senior Research Analyst with Informa Telecoms & Media with 10 years of research analysis experience. Paul has lead authored several reports across the Informa Telecoms & Media portfolios including MVNO Strategies, Mobile Entertainment, Mobile Transactions in Europe and Global Mobile Prepaid Strategies.

During his time as a research analyst, Paul has authored and co-authored several strategic reports on the subjects of telecommunications, the Internet, Metropolitan Area Networks, billing and CRM and has undertaken a range of consultancy projects including the evaluation of business strategies, market potential of new technologies and economic modelling. He has also presented findings to top-level executives at events throughout the world. Paul holds Bsc from Bristol University.

Contents

CHAPTER 1	1
EXECUTIVE SUMMARY	1
Market status	1
Defining the parameters of convergence and FMC	1
FMC players' convergence strategies	1
Pure mobile operators	1
Integrated or hybrid operators	2
Pure fixed operators	4
Cable operators	4
Other players	5
Forecasts	6
General assumptions	6
Total FMC subscriber forecasts	6
<i>Figure 1.1: Global: total combined FMC subscribers, 2008-2013</i>	7
Device-based FMC subscriber forecasts	7
<i>Figure 1.2: Global: FMC device-based subscribers, 2008-2013</i>	7
<i>Figure 1.3: Global: FMC device-based subscribers, by usage of voice only and voice and data, 2008-2013</i>	8
<i>Figure 1.4: Global: FMC device-based subscribers, by consumer/enterprise segments and by voice only/voice and data usage, 2008-2013</i>	9
Femtocell FMC subscriber forecasts	9
<i>Figure 1.5: Global: femtocell FMC subscribers, by network technology generation, 2009-2013</i>	10
CHAPTER 2	11
STRATEGIC APPROACHES	11
FMC: an idea in waiting	11
Market developments	11
Defining convergence in the context of FMC	13
End users and convergence	13
The origins of the concept of convergence and its use	13
<i>Figure 2.1: End-user impetus for convergence</i>	14
Convergence in the context of telecommunications	15
<i>Figure 2.2: Telecommunications convergence</i>	15
Fixed mobile convergence	15
<i>Figure 2.3: FMC in context</i>	16
<i>Figure 2.4: Convergence roadmap from an FMC perspective</i>	17
<i>Figure 2.5: FMC defining attributes</i>	18
FMC player strategies	19
Pure mobile operators	19
Integrated or hybrid operators	20
Pure fixed operators	21
Cable operators	22
Other players	22
VoIP alternative service providers	22
Device manufacturers	23

CHAPTER 3	25
BUSINESS OPPORTUNITIES AND CHALLENGES	25
Major opportunities and challenges of FMC	25
Data traffic offloading	25
<i>Figure 3.1: General improvements offered by femtocells</i>	26
<i>Figure 3.2: Femtocell barriers to deployment</i>	27
VoIP	28
Handset and device developments	29
<i>Figure 3.3: Selected Wi-Fi enabled devices</i>	30
Opportunities and threats: service providers	31
Pure mobile operators	31
<i>Figure 3.4: Pure mobile operators: convergence opportunities and threats</i>	31
Tier 2 and 3 pure mobile operators	32
Pure fixed operators	32
<i>Figure 3.5: Pure fixed operators: convergence opportunities and threats</i>	32
Integrated/hybrid operators	33
<i>Figure 3.6: Integrated/hybrid operators: convergence opportunities and threats</i>	33
Cable/broadband operators	34
<i>Figure 3.7: Cable/broadband operators: convergence opportunities and threats</i>	34
Alternative operators	35
<i>Figure 3.8: Alternative operators: convergence opportunities and threats</i>	36
Opportunities and threats: convergent service enablers	37
Device and network manufacturers	37
<i>Figure 3.9: Device and network manufacturers: convergence opportunities and threats</i>	37
Software application and hardware vendors	37
<i>Figure 3.10: Software application and hardware vendors: convergence opportunities and threats</i>	38
CHAPTER 4	39
PRICING AND BUNDLING STRATEGIES	39
Pricing and service bundling	39
Fixed pricing anomalies	39
Pricing as an incentive to take up FMC	39
Customer perception of bundling and 'bucket' plans	40
Handset price points	40
Convergence, mobile handset segmentation and pricing	40
Alternative pricing strategies	41
Advertising and subsidizing	41
Mobile operators' resistance to advertising-based solutions	42
Privacy issues	43
FMC and backhaul	44
Quantifying backhaul costs	44
Next-generation networks	45
CHAPTER 5	47
NEW FMC SERVICE PROVIDERS	47
<i>Figure 5.1: Selected virtual service providers</i>	47
Truphone	49
Company background	49
<i>Figure 5.2: Selected Truphone investors, August 2008</i>	49

Service offering	49
Market focus	50
Device strategy	50
Pricing strategy and customer support	51
Analysis	51
Rebtel	54
Company background	54
Service offering	54
<i>Figure 5.3: Rebtel free call process</i>	55
Market focus	55
Device strategy	55
Pricing strategy and customer support	56
Analysis	56
HelloSoft	58
Company background	58
Service offering	58
<i>Figure 5.4: Selected HelloSoft VoIP products</i>	59
Market focus	59
Pricing strategy and customer support	59
Analysis	60
 CHAPTER 6	 61
CONVERGENT SERVICE ENABLERS	61
<i>Figure 6.1: Selected convergent service enablers</i>	61
Radio access network provider: Ubiquisys	63
Company background	63
Service offering	64
Market focus	64
Pricing strategy and customer support	65
Analysis	65
Handset vendor: Nokia	67
Company background	67
Service offering	67
<i>Figure 6.2: Selected Nokia dual-mode devices (Aug-08)</i>	68
Market focus	69
Pricing strategy and customer support	70
Analysis	70
Network service provider: Alcatel-Lucent	72
Company background	72
Service offering	72
<i>Figure 6.3: Alcatel-Lucent IMS/converged services and applications.</i>	72
Market focus	74
<i>Figure 6.4: Alcatel-Lucent organization.</i>	74
Pricing strategy and customer support	74
Analysis	74

CHAPTER 7	77
FMC OPERATORS	77
Operator types	77
<i>Figure 7.1: FMC operator strategies</i>	77
<i>Figure 7.2: Selected FMC operators</i>	78
Fixed operator: Telefonica	79
Company background	79
Service offering	80
Market focus	80
Analysis	80
Pure mobile operator: T-Mobile	81
Company background	81
Service offering	81
Market focus	82
The US	82
<i>Figure 7.3: T-Mobile USA homezone services</i>	82
Europe	82
Analysis	83
Hybrid operator: France Telecom/Unik	83
Company background	83
Service offering	84
Market focus	84
Pricing strategy and customer support	84
<i>Figure 7.4: Orange Unik service options</i>	85
Analysis	85
Broadband/cable operator: Virgin Media	86
Company background	86
Service offering	86
Market focus	87
Pricing strategy and customer support	88
Analysis	88
CHAPTER 8	89
FORECASTS	89
Methodology	89
Definitions	89
Pragmatic approach	89
Device-based FMC subscriber forecast methodology	89
Active device users versus inactive device users	90
<i>Figure 8.1: FMC device-based forecasts methodology flowchart</i>	91
Weighting ratio methodology	91
Femtocell methodology	95
General assumptions	96
Global outlook	97
Global combined UMA, IMS and femtocell FMC subscriber forecasts	99
<i>Figure 8.2: Global: total combined FMC subscribers, 2008-2013</i>	99
Global device-based FMC subscriber forecasts – IMS and UMA	100
<i>Figure 8.3: Global: total FMC device-based subscribers, 2008-2013</i>	100

<i>Figure 8.4: Global: FMC device-based subscribers, by usage of voice only and voice and data, 2008-2013</i>	101
<i>Figure 8.5: Global: FMC device-based subscribers, by consumer/enterprise segments and by voice only/voice and data usage, 2008-2013.</i>	102
Global in-home FMC subscriber forecasts – femtocells	102
<i>Figure 8.6: Global: femtocell subscribers, by network technology generation, 2009-2013</i>	103
Regional analysis	104
Combined UMA, IMS and femtocell FMC subscriber forecasts.	104
<i>Figure 8.7: Global: combined FMC subscribers, by region, 2008-2013</i>	104
Device-based (UMA and IMS) FMC subscriber forecasts.	105
<i>Figure 8.8: Global: FMC device-based (UMA and IMS) subscribers, by region, 2008-2013</i>	106
<i>Figure 8.9: Global: FMC device-based subscribers, by region and by voice/data usage, 2008-2013</i>	107
In-home (femtocell) FMC subscriber forecasts	108
<i>Figure 8.10: Global: FMC femtocell subscribers, by region, 2009-2013</i>	108
<i>Figure 8.11: Global: femtocell subscribers, by region and by network technology generation, 2009-2013</i>	109
Country analysis	110
The US	110
<i>Figure 8.12: The US: combined FMC subscribers, 2008-2013</i>	110
<i>Figure 8.13: North America: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2008-2013</i>	111
Latin America	112
<i>Figure 8.14: Latin America: combined FMC subscribers, 2009-2013</i>	112
<i>Figure 8.15: Latin America: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	113
Asia Pacific, Developed	114
<i>Figure 8.16: Asia Pacific, Developed: combined FMC subscribers, 2009-2013</i>	114
<i>Figure 8.17: Asia Pacific, Developed: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	115
Asia Pacific, Developing	116
<i>Figure 8.18: Asia Pacific, Developing: combined FMC subscribers, 2009-2013</i>	116
<i>Figure 8.19: Asia Pacific, Developing: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	117
Western Europe	118
<i>Figure 8.20: Western Europe: combined FMC subscribers, 2008-2013</i>	119
<i>Figure 8.21: Western Europe: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2008-2013</i>	120
Eastern Europe	120
<i>Figure 8.22: Eastern Europe: combined FMC subscribers, 2009-2013</i>	120
<i>Figure 8.23: Eastern Europe: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	121
Africa	122
<i>Figure 8.24: Africa: combined FMC subscribers, 2010-2013</i>	122
<i>Figure 8.25: Africa: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2010-2013</i>	123
Middle East	123
<i>Figure 8.26: Middle East: combined FMC subscribers, 2009-2013</i>	123
<i>Figure 8.27: Middle East: FMC device-based subscribers, by voice and data and by home, office and out of home/office, 2009-2013</i>	124

APPENDIX	125
INFORMA TELECOMS & MEDIA FMC INDUSTRY SURVEY 2008	125
Methodology	125
Questionnaire	125
Network rollout section	126
FMC usage section	127
Market overview section	131
Device section	133
Regulatory section	133