

Index

- 3G
 - 3G and beyond 185, 228, 283, 284–92
 - 3G barriers 21, 32, 64, 80–2, 97
 - 3G business chain 83–4
 - 3G chances 77
 - 3G history 12–19
 - 3G revenues 22, 28, 29, 30, 38, 50, 54, 55, 57, 58, 60, 61, 62, 63, 64, 72, 73, 74, 77
 - late start of 3G 24, 55, 62, 80
- Access
 - access point name (APN) 129, 159, 160, 163, 164
- Addressing
 - aggregation of addressing 133, 134, 136, 165
- Applications
 - definition 32, 33
- Billing
 - access 113
 - challenges and opportunities 112–13
 - content 113
 - corporates 113
 - traditional users 114
 - transport 113
- Branding 40, 69, 101, 109
- Business strategies 84, 110
- Camera phone
 - camera phone ban 22, 80, 81, 289
- Considerations
 - commercial considerations 194
 - regulatory considerations 195
 - technical considerations 194
- Content
 - harmful and illegal content 116–17
 - protection of minors 116–17
- Customer care 99, 102, 106, 107, 109, 121
- Devices 156–7
- E.164 78, 120, 126–32, 134, 138, 161
- European Union
 - Directives 115, 230, 231, 236
 - research programmes 181
 - UMTS decision 13, 186, 231–2
 - UMTS Task Force 12–14, 72
- Extranet 34, 40, 59
- Fixed–Mobile convergence 242–3
- GPRS 14, 34, 53, 55, 56, 62, 70, 71, 76, 93, 95, 121, 123, 129, 134, 135, 136, 149, 150, 155, 157, 158–9, 160, 163, 164, 178, 197, 198, 208, 223, 224, 225, 226
- GSM 2, 4, 8, 9, 11, 12, 14, 15, 17, 19, 24, 27, 35, 41, 56, 68, 69, 71, 82, 114, 121, 123, 126, 129, 130, 131, 132, 137, 138,

GSM (Continued)

141, 143–5, 149, 150, 152, 153, 155,
158, 173, 178, 188, 189, 190, 198, 205,
208, 214, 216, 218, 223, 228, 237, 244,
255, 256, 259, 260, 263, 267, 269,
276–9, 283, 285, 286, 292

GSM Association 129, 138, 141

Health issues 81, 261

HIPERLAN 2, 5, 9, 146, 147, 148, 181

ICANN 132, 133, 141, 161, 166, 167

Imaging 260–1, 269, 273, 274, 275–6

Internet

Internet names 127, 128, 129, 132

Intranet 34, 40, 59

IP

IMS vision 119

IP addresses 112, 118, 120, 124, 126,
127, 129, 134, 136, 155, 156,
158–64, 165, 166, 169

mobile IP 118, 119, 150, 151, 152,
155, 175

multimedia subsystem (IMS) 118–25,
170–7, 283, 285

voice over (VoIP) 36, 42, 118, 121, 124,
146, 148, 170, 171, 172, 174, 175,
181, 285

IPv4 117, 134, 135, 136, 149, 155, 156,
165, 166, 167, 169, 170

IPv6 117, 118, 134, 135, 136, 149,
150, 154, 155, 156, 167, 168,
169, 170

Licensing

administrative pricing 234, 236, 237–8
auction 187, 234, 236, 239, 240, 241,
252

comparative bidding 234, 239, 240

coverage obligations 243, 244

licence fees 75, 234, 235, 237, 241, 242,
250, 252

licensing conditions 116, 233, 243, 249

licensing costs 249

lottery 240

rights 233

rollout obligations 243, 244, 248

taxation 241–2, 250

Local area network (LAN)

HIPERLAN 2, 5, 9, 146, 147, 148, 181

Wi-Fi 22, 70, 71, 72, 82, 179, 181, 194

WLAN 2, 5, 40, 70, 71, 72, 73, 74, 95,
124, 146, 173, 179, 180, 181, 192,
194, 223, 225, 226, 252, 256, 283,
284, 285, 287, 288, 289, 290, 291

Market

customers' expectations 21, 22, 77

key market segments 85

mapping 35–8

market analysis 11, 21, 30

market dynamics 23

market expectations 21, 29, 46, 70, 72,
76, 145, 190, 240

market forecast 27, 29, 198, 200,
207, 210

market size 49, 50, 146

market study framework 32

market study methodology 27–8

mobile communications market 15, 21

price trends 21, 44, 51

service revenue 15, 31, 50, 54, 56, 61,
62, 74, 95

subscribers 21, 50, 53

subscription 19, 24, 31, 32, 36, 46, 47–8,
49, 50–3, 54, 71, 102, 144, 190

worldwide market 50, 52

Mobile

Mobile Equipment Identifier 138, 178

Mobile Network Codes 136

Mobile Station Identifier 136–8, 164

mobile top level domain 139, 140, 141

Mobile network operator (MNO) 101, 139,
140, 141, 194

Mobile virtual network operator (MVNO)
140, 194, 198

Mobility 9, 15, 22, 23, 31, 34, 38, 48, 59,
63, 66, 150, 151, 199, 201

Multimedia 15, 18, 34, 35, 36, 38, 41, 42,
45, 47, 51, 52, 60, 118, 149, 157,
171, 209

Multimedia, mobile platform 103, 149

Name

domain name 78, 126, 127, 132, 134,
139, 158, 159, 160, 161, 162,
163, 164

E.164 126, 128–32

name relationship 126

Naming

general naming 126

internal naming 129

naming relationship 126

Network

network infrastructure 26, 37, 48, 134,
194, 243, 245, 246, 249

network interoperability 120

network security 40

Number

allocation 131

E.164 120, 126, 127, 129, 130, 131, 132,
134, 138

Mobile Station Roaming Numbers

132, 134

number portability 99, 130, 131,

137, 138

personal numbering 130, 131, 132, 137

Portal

business models 99–100

content 101, 102

definition 100

owner's perspective 107

requirements for set-up 104

user's perspective 104, 107

Privacy

data protection 115

legal interception 108, 115, 116

legal location 116

legal protection 116

Regulation

consequences 231

facility sharing 246, 249

historical background 229

infrastructure sharing 243, 246, 249

nature of licence 248

political implications 231

regional licences 247

Research

ACTS 17, 152, 288

IST 287, 288

RACE 12, 192, 288

Revenue

Asia-Pacific 64

average revenue per user (ARPU)

18, 52, 53, 54, 55–6, 58, 60, 62,
75, 79, 92

calculations 38

Europe 18, 22

incremental revenue per 3G subscriber
(IRPS) 54, 55

Latin America 66, 67

North America 62

rest of the world 66

revenue by communication type 57

revenue by revenue type
57, 58

Roaming

international roaming 31, 143, 144,
190, 244, 255

national roaming 77, 243–7, 249

Role

role of content provider 104

role of Internet services
provider 104

Satellite systems

Globalstar 7, 8

Inmarsat 6, 7, 11

Iridium 7, 8

Security

encryption 152, 153

technical fraud 153

Services

broadcast 79, 239

business models 35, 36, 38, 39, 41,
42, 43, 45, 47, 49, 50, 51, 53, 57,
59, 60, 79

customised infotainment 31, 34, 35,
40, 41, 49, 50, 51, 52, 53, 55,
59–68, 76, 220–3

entertainment 16, 85, 88, 89

experts on call 93, 95

interactive games 90, 91, 92

Services (Continued)

- location-based 22, 31, 35, 37, 41, 42, 50, 55, 60, 61, 62, 63, 64, 67, 76, 83, 84, 88, 89, 115, 220–3
- mobile shopping 92–4
- multimedia messaging 31, 35, 41, 42, 50, 51, 52, 60, 76, 78, 123, 220, 223
- network providers 48
- non-voice services 76
- quality of services 173
- revenue models 30, 47, 53
- services categories 84
- services content providers 48, 50, 110, 245
- services definition 32, 36, 41, 86, 87
- services demands 33, 36, 77, 80, 267
- services implications 48
- services mapping 35
- services monitoring 87, 98
- services providers 23, 26, 30, 32, 33, 35, 36, 37, 39, 40–3, 50, 89, 100, 104, 110
- services types 114, 127, 193
- telematics 97–9, 108
- telemetry 60, 87, 97, 98, 99, 214
- top five countries for 3G 68, 69, 70
- video 61, 78, 79
- voice services 15, 33, 35, 42, 52, 53, 61, 62, 75, 115, 131, 192

Social

- private use of mobiles 126, 192
- public use of mobiles 129
- social behaviour 259
- social connectivity 261–5, 267, 271, 272, 279, 280
- social emotion 268, 269, 280, 281
- social evidence 277, 279

Spectrum

- Africa and Arab states 189
- Asia-Pacific 65, 144, 187, 189, 216
- asymmetric spectrum 195
- Europe 12, 144, 186, 187, 189, 209
- extension bands 185, 187, 190, 207, 209, 211, 212, 215
- Latin America 189

minimum spectrum per operator

200, 203

North America 65, 187, 188

spectrum allocation 187, 191, 194, 201, 203, 207, 211, 244, 289

spectrum as a taxation instrument 241, 248

spectrum availability 185, 203, 207, 217, 218, 240

spectrum calculations 192, 196, 198, 200

spectrum efficiency 193–5, 200, 201, 203, 204, 213

spectrum estimates 13, 191, 192, 198, 209, 210

spectrum pricing 233, 234, 235, 238, 239, 241, 242, 248, 249

spectrum sharing 189, 193, 194, 195

symmetric spectrum 195

value of spectrum 238

Standardisation

3GPP 86, 119, 121, 132, 143, 148–54, 171, 175–7, 226, 255, 292

ETSI 4, 10–12, 17, 72, 148, 149, 181, 184, 192, 193, 200, 204

IEEE 8, 9, 70, 72, 146, 148, 179, 180, 181, 284, 287, 289

IETF 117, 119, 136, 149, 150, 151, 152, 171, 173, 176, 292

ITU 17, 24, 78, 125, 126, 127, 129, 132, 133, 136, 137, 138, 143, 148, 149, 173, 183–9, 191, 201, 208–12, 214, 215, 216, 217, 226, 228, 229, 232, 233, 235, 252, 254, 255, 256, 286, 289, 290, 292

System design 289, 291*Technology*

analogue cellular 2, 3

cordless systems 2, 4

i-mode 34, 47, 51, 76, 80, 148

IMT-2000 concept 2, 23, 77, 103, 115, 116, 118, 143, 144, 145, 146, 147, 148, 149, 152, 153, 185–9, 191, 194, 196, 207–18, 227, 228, 237, 254, 255, 256, 257, 284

- in-flight telephone 10, 11
 - paging systems 8–10
 - professional mobile radio 4
 - short range radio 5, 179
 - terrestrial trunked radio 4
 - WAP 70, 80, 93, 101, 105, 148, 149, 176, 177
 - wireless competitors 17, 72, 80, 99, 103, 146, 246
- Terminal
- terminal certification 254
 - terminal circulation 253, 254, 255, 256
 - terminal novelty 77
- Top level domain (TLD) 132, 139, 141, 160
- Traffic
- asymmetry traffic 191, 196, 203, 205, 206, 207, 220, 221, 222, 225, 226
 - traffic calculations 191, 194, 198, 199, 217, 225
 - traffic capacity 198, 226
 - traffic characteristic 185, 190, 191, 210, 217, 220, 223
- UMTS
- UMTS architecture (with IMS) 152, 157, 175, 176
 - UMTS baseline network architecture 175
 - UMTS concept 14, 23, 70, 150, 208
 - UMTS satellite component 13, 249
 - UMTS spectrum 183, 187, 196, 198, 234, 241, 244, 247, 248
 - UMTS Forum 13, 16, 17, 22, 24, 27, 28, 31, 35, 36, 38, 49, 53, 54, 55, 57, 59, 66, 70, 72, 74, 125, 139, 140, 141, 144, 146, 148, 156, 185, 189, 190, 191–3, 196–8, 200–4, 207–10, 212, 217, 220, 223, 225, 226, 227, 233, 234, 242, 247, 248, 250, 254, 255, 259, 260, 279, 286, 289, 292
- User profile 45, 99, 105
- VHE (virtual home environment) 85, 114, 245
- Voice
- rich voice 31, 35, 36, 38, 42, 43, 45, 47, 50, 55, 61–7, 78, 79, 220–3
 - simple voice 53, 55, 57, 60–7, 220, 221, 222, 223, 224
- WARC-92 185, 186, 187, 188, 189, 190
- Wi-Fi 22, 70, 71, 72, 82, 179, 181, 194
- Wireless World Research Forum (WWRF) 286, 287
- WLAN (Wireless Local Area Network) 2, 5, 40, 70–4, 95, 124, 146, 173, 179, 180, 181, 192, 194, 223, 225, 226, 252, 256, 283, 284, 285, 287, 288, 289, 290, 291
- WRC 2000
- decisions made at WRC 2000 189, 208, 211, 216
 - situation after WRC 2000 187, 189, 217
- WRC-2007/WRC-07 185, 227, 228, 287, 289, 291, 292





