

# **ANNEXES**

## • • Annex I - List of acronyms and abbreviations

ADSL	Asymmetric Digital Subscriber Line	NRA	National Reg
AAS	Analytical Accounting System	OSP	Other Service
BWA	Broadband Wireless Access	QSI	Quality of Se
CIS	Centralised Information System	R&TTE	Radio and Te
CPI	Consumer Price Index	Name	Equipment
DSLAM	Digital Subscriber Line Access Multiplexer	RDAO	Reference Du
DTH	Direct-to-Home	RIO	Reference In
DTT	Digital Terrestrial Television	RUO	Reference of
DVB-H	Digital Video Broadcasting - Handheld	SMP	Significant M
EAFRD	European Agricultural Fund for Rural	SMS	Short Messag
	Development	SPAM	Unsolicited c
ECL	Electronic Communications Law	SRD	Short Range
	(Law no. 5/2004 of 10 February)	TTE	Transport, Te
ENUM	Electronic Numbering	UMTS	Universal Mo
FAQ	Frequently Asked Questions	US	Universal Ser
FTS	Fixed Telephone Service	USP	Universal Ser
FWA	Fixed Wireless Access	UWB	Ultra Wideba
GHz	Gigahertz (unit of frequency equal to one	VAT	Value-Added
	thousand million Hertz)	VOIP	Voice Over In
GI	Overall indicator of quality of service	WAPECS	Wireless Acce
GSM	Global System for Mobile communications		Communicati
ICT	Information and Communication Technologies	WLRO	Wholesale Li
IP	Internet Protocol	WRC	World Radioc
IS	Information System		
ISDN	Integrated Services Digital Network		
ITED	Telecommunications infrastructure in buildings		
ITUR	Infrastructures for telecommunications in		
	housing developments, urban settlements and		
	concentrations of buildings		
Kbps	Kilobit <i>per</i> second (thousands of bits <i>per</i> second)		
LLRO	Leased Lines Reference Offer		
LLU	Local Loop Unbundling offer		
LMS	Land Mobile Service		
LRIC	Long Run Incremental Costs		
LTE	Long Term Evolution		
Mbps	Megabit <i>per</i> second (millions of bits <i>per</i> second)		
MCV	Mobile Communications on Vessels		
MHz	Megahertz		
MSS	Mobile Satellite Services		
MTS	Mobile Telephone Service		
MVNO	Mobile Virtual Network Operator		
NTFA	National Table of Frequency Allocation		
NGA	Next Generation Access Networks		
NGN	Next Generation Networks		

NNP

National Numbering Plan

gulatory Authority ce Providers ervice Indicators elecommunications Terminal ouct Access Offer nterconnection Offer offer for local loop unbundling Market Power age Service communications e Devices Telecommunications and Energy obile Telecommunications System ervice Provider and Technologies d Tax Internet Protocol cess Policy for Electronic tions Services ine Rental Offer communication Conference

ANNEXS 118

. . . . .

### Annex II - List of operators

Bragatel Bragatel - Companhia de Televisão por Cabo de Braga, S. A.

Bravesensor Bravesensor, Unipessoal, Lda. CTT CTT - Correios de Portugal, S.A.

Grupo PT Grupo Portugal Telecom

OniTelecom OniTelecom - Infocomunicações, S. A.

PTC PT Comunicações, S. A.

Radiomóvel Radiomóvel - Telecomunicações, S.A.

RNT RNT - Rede Nacional de Telecomunicações, S. A.

Repart Repart - Sistemas de Comunicação de Recursos Partilhados, S. A.

Sonaecom Sonaecom - Serviços de Comunicações, S. A. Vodafone Vodafone Portugal - Comunicações Pessoais, S. A.

ZON Multimédia ZON Multimédia - Serviços de Telecomunicações e Multimédia, SGPS, S. A.

ZON TV Cabo ZON TV Cabo Portugal, S. A.

#### • Annex III - List of other entities / organisations

AdC Autoridade da Concorrência (Competition Authority)

ARCTEL-CPLP Associação de Reguladores de Comunicações e Telecomunicações da CPLP (Association of Communications

and Telecommunications Regulators of the CPLP)

BEREC Body of European Regulators for Electronic Communications
CENELEC European Committee for Electrotechnical Standardization

CEPT European Conference of Postal and Telecommunications Administrations

CERP European Committee for Postal Regulation

CNPD Comissão Nacional de Protecção de Dados (National Data Protection Commission)

COCOM Communications Committee

COREPER Permanent Representatives Committee
CPLP Community of Portuguese Speaking Countries

DGC Direcção-Geral do Consumidor (Directorate General for the Consumer)

EC European Commission

ECC Electronic Communications Committee

ECTA European Competitive Telecommunications Association

EEA European Economic Area

EMERG European Mediterranean Regulators Group

EMGFA Estado-Maior-General das Forças Armadas (Armed Forces General Staff)

ENISA European Network and Information Security Agency

ERC Entidade Reguladora para a Comunicação Social (Media Regulatory Authority)

ERG European Regulators Group

ETSI European Telecommunications Standards Institute

EU European Union

FCCN Fundação para a Computação Científica Nacional (Foundation for National Scientific Computing)

ICP-ANACOM ICP - Autoridade Nacional de Comunicações IEC International Electrotechnical Commission

INAC Instituto Nacional de Aviação Civil (National Civil Aviation Institute)

INCM Imprensa Nacional Casa da Moeda (National Mint)

IPQ Instituto Português da Qualidade (Portuguese Institute of Quality)

IRG Independent Regulators Group

ITU International Telecommunication Union

OECD Organisation for Economic Cooperation and Development

Regulatel Fórum Latino-americano das Entidades Reguladoras de Telecomunicações (Latin-American Forum of

Telecommunications Regulatory Authorities)

RSC Radio Spectrum Committee RSPG Radio Spectrum Policy Group

RTIC Rede Telemática de Informação Comum (Telematic network of common information)

SCEE Sistema de Certificação Electrónica do Estado (Managing Council of the Electronic Certification System of

the State)

SSB Sectorial Standardisation Body

UMIC Unidade de Missão Inovação e Conhecimento (The Knowledge Society Agency)

UPU Universal Postal Union

WPISP OECD Working Group on Information Security and Privacy

WTO World Trade Organisation

ANNEXS 120

## • • Annex IV - Index of graphs

Graph 1. Evolution in the number of unbundled loops	25
Graph 2. Percentage of unbundled loops compared to the total number of active accesses of the	
incumbent operator	24
Graph 3. Percentage of unbundled loops compared to the total number of retail broadband accesses	24
Graph 4. Number of exchanges with co-located operators	25
Graph 5. LLU coverage in terms of FTS subscribers - main distribution frames considered in descending order	
in respect of the number of loops in use	25
Graph 6. Monthly charge for local loop (full access) - EU15 comparison	27
Graph 7. One-off prices for local loop installation (full access) - EU15 comparison	28
Graph 8. Evolution of OSP accesses based on the Rede ADSL PT offer	28
Graph 9. Annual price of 64 Kbps digital circuits in Europe (November 2009)	30
Graph 10. Annual price of 2 Mbps digital lines in Europe (November 2009)	31
Graph 11. Annual price of 34 Mbps digital lines in Europe (November 2009)	32
Graph 12. European comparisons - fixed interconnection prices (call origination and termination)	33
Graph 13. European practices regarding pre-selection activation prices (September 2008)	35
Graph 14. European practices relating to the portability price <i>per</i> individual number (September 2008)	36
Graph 15. European comparisons - portability prices (September 2008)	36
Graph 16. Information presented by PTC on analogue and ISDN accesses with active WLRO, excluding the	
activations of the companies of Grupo PT	37
Graph 17. Number of responses to requests for information	38
Graph 18. Number of responses to requests for assessments of viability	38
Graph 19. Number of interventions in the context of the RDAO	38
Graph 20. Time taken to respond to requests for information on ducts and associated infrastructure	39
Graph 21. Time taken to respond to requests for feasibility assessments	40
Graph 22. Time taken to schedule accompaniment of non-urgent interventions	40
Graph 23. Time taken to schedule accompaniment of urgent interventions	41
Graph 24. Degree of availability of accompaniment service	41
Graph 25. Percentage deviation of total public payphones in 2009 compared to forecast	48
Graph 26. Real evolution in the average annual price index of the base tariff (1993 = 100): national	
non-priority and priority mail	53
Graph 27. Global Indicator of Quality of Service (GI)	54
Graph 28. Number of postal establishments	55
Graph 29. Evolution of the number of ported numbers	57
Graph 30. Evolution of the number of actual ported numbers in database	57
Graph 31. Evolution of the deadlines for number portability	58
Graph 32. Evolution of the deadlines for number portability over the course of 2009	58
Graph 33. Evolution of the number of indirect access customers using pre-selection	59
Graph 34. Trends in the quarterly volume of complaints by type of entry	66
Graph 35. Complaints by type of entry	67
Graph 36. Complaints by sector	67
Graph 37. Complaints about the postal sector, by service	70
Graph 38. Accumulated value of numbers assigned nationally	81
Graph 39. Accumulated value of audiotext numbers assigned nationally	82
Graph 40. Numbers for valued-added services based on message sending allocated at national level (2009)	83

### Annex V - Index of tables

Table 1. Validation of average affidal interconflection revenues in 2003 compared to 2006, for origination	
and termination services, based on an average call duration	33
Table 2. Comparison of interconnection prices with the practices of the EU15 (price per minute of a	
three minute call)	34
Table 3. Maximum prices for portability activation by number	35
Table 4. Quality of service parameters of US	45
Table 5. Overall Public payphone planned and actually installed in 2009	47
Table 6. FTS tariff proposed by PTC	49
Table 7. Tariff approved by ICP-ANACOM for the public payphones of FTS	50
Table 8. QSI defined in the Quality Convention and achieved by CTT in 2009	54
Table 9. Services giving rise to most complaints (electronic communications)	68
Table 10. Total complaints by subject (electronic communications)	69
Table 11. Geographic numbers - evolution of the national situation	80
Table 12. Non-geographic numbers - evolution of the national situation	80
Table 13. Accumulated value of numbers assigned nationally	81
Table 14. Audiotext numbers - national trends	82
Table 15. Accumulated value of numbers assigned nationally	82
Table 16. Figures for message-based valued-added services - national situation	83
Table 17. Cases initiated in 2008 and processes carried forward	91

122

#### ANNEXS . . . . .

Figure 1. Municipalities in the tender	18
Figure 2. Location of exchanges where OSP make use of the LLU in Mainland Portugal (fourth quarter of 2009)	26
Figure 3. Location of exchanges with Digital Subscriber Line Access Multiplexer (DSLAM) with subscribers (2009)	29