
Contents

1	Introduction	1
1.1	And Television Awoke	1
1.1.1	An Unquestionable Importance	1
1.1.2	The Importance of the Digital Transition	4
1.1.3	The PDR and Non-linear Consumption of TV	6
1.1.4	The Importance of Standardization	7
1.2	TV-Anytime	8
1.3	New Business Models	10
1.3.1	TV-Anytime Phase 1	11
1.3.2	TV-Anytime Phase 2	12
1.4	Organizing the Standard	13
1.5	Book Contents	16
2	Architecture and Components	19
2.1	Introduction	19
2.1.1	Phase 1	20
2.1.2	Phase 2	21
2.2	Content Reference Identifier (CRID)	22
2.2.1	What Is a CRID?	22
2.2.2	Resolution of a CRID	24
2.3	Metadata	26
2.3.1	Metadata Defined in Phase 1	28
2.3.2	Metadata Defined in Phase 2	30
2.4	Metadata Transport	31
2.4.1	Requisites for Transport Mechanisms	32
2.4.2	Segmentation and Delivery of TV-Anytime Information	32
2.5	Bidirectional Services	34
2.5.1	Metadata Provision Services	34
2.5.2	Remote Programming	35

2.6	An Illustrative Example	36
2.7	Summary	43
3	Content Reference Identifier (CRID)	45
3.1	Introduction	45
3.1.1	Referencing Contents Unambiguously	45
3.1.2	CRID	46
3.1.3	References Versus Identifiers	47
3.1.4	Roles in the Creation and Resolution of CRIDs	48
3.2	Reference and Locator Formats	49
3.2.1	CRID Format	49
3.2.2	Locator Format	50
3.2.3	Instance Metadata Identifier (<i>IMI</i>)	51
3.3	Relevant Information in the Resolution Process	53
3.3.1	Resolving Authority Record	53
3.3.2	ContentReferencingTable	55
3.4	Location Resolution Process	57
3.4.1	Resolution in Unidirectional Networks	57
3.4.2	Resolution in Bidirectional Networks	59
3.5	Summary	61
4	Metadata	63
4.1	Introduction	63
4.1.1	Objectives of Metadata	63
4.1.2	The Metadata Life Cycle	64
4.1.3	Representation Format	66
4.1.4	Types of Metadata	67
4.1.5	Classification Schemes	68
4.2	Phase 1 Metadata	69
4.2.1	Generic Content Description Metadata	69
4.2.2	Instance Description Metadata	74
4.2.3	Consumer Description Metadata	77
4.2.4	Segmentation Metadata	81
4.3	Global Structure of Metadata	84
4.4	Extensions of TV-Anytime Phase 2	87
4.4.1	New Content Types	87
4.4.2	New Phase 2 Metadata	89
4.4.3	Extensions to Structures Defined in Phase 1	90
4.5	Classifications	91
4.5.1	Objectives	91
4.5.2	Classification Types	91
4.5.3	Example	94
4.6	Summary	97

5	Targeting and Advertising	99
5.1	Introduction	99
5.2	Targeting	100
5.2.1	Introduction	100
5.2.2	User Information	101
5.2.3	Environmental Description Information	104
5.2.4	Combining Targeting Information	108
5.3	Interstitials	108
5.3.1	Motivation	108
5.3.2	Spots and Pods	110
5.3.3	Replacement Rules	110
5.3.4	Conditioned Replacements	111
5.3.5	Recording Cache	114
5.4	Coupons	116
5.5	Summary	118
6	Packaging	121
6.1	Introduction	121
6.1.1	New Business Model	121
6.1.2	Packages and Their New Functionalities	122
6.2	Package Description	124
6.2.1	Introduction	124
6.2.2	<i>Component</i>	125
6.2.3	<i>Item</i>	127
6.2.4	Package	130
6.2.5	A Programme with an Associated Package	132
6.3	Conditional Reproduction	132
6.4	Package Location Resolution	136
6.5	Summary	137
7	Metadata Transport in Unidirectional Environments	139
7.1	Introduction	139
7.2	Generic Features of the Platform	140
7.3	Fragmentation	141
7.3.1	Fragment Types	142
7.4	Encoding	144
7.4.1	Containers	144
7.5	Encapsulation	145
7.6	Indexing	145
7.7	Requirements for the Transport Mechanism in a Unidirectional Environment	147
7.8	Summary	147

8	Metadata Provision Services in Bidirectional Environments	149
8.1	Introduction	149
8.2	Query Types	151
8.2.1	“ <i>get_Data</i> ” Operation	152
8.2.2	“ <i>submit_Data</i> ” Operation	154
8.2.3	“ <i>upload_Personal_Data</i> ” Operation	154
8.2.4	“ <i>clear_Personal_Data</i> ” Operation	154
8.3	Description of Service Capacities	154
8.4	Transport Protocols	155
8.5	Service Discovery	156
8.6	Profile Sharing	158
8.6.1	Exchanged Information	159
8.6.2	Standardized Operations	160
8.7	Summary	163
9	Remote Terminal Programming	165
9.1	Introduction	165
9.2	Data Exchange Format	166
9.2.1	Objective	166
9.2.2	Packaging Structure	166
9.3	Remote PDR Programming	168
9.3.1	Objective	168
9.3.2	Remote Programming by Email	169
9.4	Remote NDR Programming	171
9.4.1	Objective	171
9.4.2	Controlling an NDR	172
9.4.3	Transporting Messages	176
9.4.4	Describing Service Capabilities	177
9.5	Summary	178
10	Conclusions	181
10.1	A Broad Regulatory Framework	181
10.2	An Ambitious Regulatory Framework	182
10.3	A Necessary Regulatory Framework	183
	Bibliography	185
	Index	189

TV-Anytime

Paving the Way for Personalized TV

Gil Solla, A.; Sotelo Bovino, R.G.

2013, XX, 199 p., Hardcover

ISBN: 978-3-642-36765-6