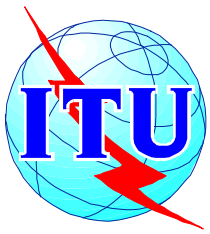
Potential for harmonising new services and short codes numbering in Asia and the Pacific region



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Introduction

Traditional numbering plans catered only for geographic services. Services did not have a need for harmonisation of numbers until new service products began to be introduced

These new service products, such as free phone national and International - UIFN, cellular mobile and personal numbering (UPT), require their own numbering ranges. In addition, the new competitive environment leads to a requirement for carrier selection codes.

Customers will find it helpful if the new services and facilities in the national numbering plan are distinct to help them to recognise what they are calling (and what is the charge incurred). This recognition is enhanced if similar numbering practices are used internationally. International numbering harmonisation helps people who make international phone calls, and especially those who travel to other countries.

Harmonisation of numbering for new services can be achieved at low cost if the numbering ranges to be used are free, or if (as in many countries) some reorganisation of existing numbering is needed anyway to allow for growth and competition.

Summary of findings from survey of numbering practices in Asia-Pacific countries

Short codes (Table A1)

• Both Asia and Europe predominantly use the 1XX range for short codes. Within this range however most countries have chosen short codes independently, with the predictable result of few matching codes. CIS countries reviewing their numbering plans and wishing to move towards ITU standards and conventions have a clear migration path available to bring their short codes into the 1XX range, by putting 1 in front of the existing 0XY numbers.

• The only deliberate and successful harmonisation is the European and GSM emergency short code 112. The old European proposals of 118 for directory enquiries and 115 for the operator have not achieved much takeup even in Europe, although 118 has a marginally more "official" status than 115 and may become more popular.

• Few Asian countries are using 112 for basic services. There is therefore the potential for much of Asia to adopt this code for emergency services (depending on national circumstances, this may be in addition to existing emergency codes or may eventually replace them). Wider harmonised use of the 11X range is an interesting possibility, and worth exploring.

New services numbering (Tables A2 and A3)

• In Europe, two methods are mainly used to set new non-geographic services clearly apart from PSTN numbering: a distinct first digit (often a late one - 7, 8 or 9); or the distinct second digit 0 (ie the X0 series). It is too early to generalise about any such methods in Asia.

• There is however a clear trend in Asia towards using 80(0) for freephone and 90(0) for premium rate services, possibly after the first digit 1. A parallel trend is clear in Europe, despite the existence there of a variety of "old" codes for services set up several years ago.

• Most Asian countries are, like European ones, establishing separate codes for mobile services which can reflect different tariffs. There is however no clear trend (either in Asia or

in Europe) on which codes are used to number mobile services, beyond a tendency in Asia to use the (often otherwise unused) space after the initial digits 1, 8 or 9. However there is a clear trend in Europe towards using the initial digit 7 (or, to a lesser extent, 8) for personal numbering (UPT).

• No examples of shared-cost services in Asia have emerged from the survey. There is no clear trend in Europe for the numbering of these services, beyond some tendency to use a late initial digit (7, 8 or 9).

Numbering for competition

• Many European and Asian countries that have or are planning long distance competition will use the 1XX short code range for carrier selection. Most sub-ranges are used somewhere, with a predominant choice of 10X(X). To a lesser extent 0(0)X ranges are also used for carrier selection - though this usually results in non-conformity with the ITU standard trunk and international dialling procedures (0 or 00 plus national or international significant number, respectively).

• Most European countries that have or are planning local competition will have a single set of geographic NDCs, used consistently by all competitors. Every competitor in any given NDC area receives one or more block of local numbers behind that NDC. This arrangement is usually much preferred by users to the alternative of separate numbering arrangements for different operators. All six Asian countries responding to this part of the survey indicated an intention to do the same.

Table A1 Short codes in Asia-Pacific countries

	Emergency	Directory enquiry	Fault report	Operator
Australia	112, 000, 1144X	013, 0175, 0103	1100	011, 0101, 12X
Bangladesh				
Brunei		113	111	
Cambodia	117, 118, 119	1213, 1203	106X (*)	1215, 1205
China	119, 110. 120	114, 116	112	160, 113, 173
CIS (typical)	01, 02, 03, 04	060, 063, 09	007	07, 062
Fiji (C)	000	011, 022	015	010
Hong Kong (C)	99X (***)	108X	109	10X

India	100, 101, 102	197	198	180/1, 186/7
Indonesia	110. 113, 118	108		100
Japan	110, 119	104	113	100
Laos	190, 191, 195	178	175	170, 171
Macau (C)	999	185,181	121	101, 191, 155
Malaysia	99X, 112 (GSM)	103, 1301	100	101, 102, 108
Maldives	102, 118, 119	110	112, 195	190
Mongolia	100, 101, 102, 103	109	180-188	106/7/8, 116/7/8
Myanmar	191, 192, 199	100, 130	102	101, 131
Nepal	100, 101	187, 197	198	180, 186
New Zealand	111	018, 0172	120, 125	010, 0170
North America	911	411	611	0
Pakistan	15, 16, 115	17, 107	18, 108	109, 102-5
Papua N Guinea	000	013	014	011, 016
Philippines	16X	114, 112	173	108, 109
Singapore (C)	995, 999	100, 104	900	104
South Korea	112, 119	114	110	
Sri Lanka	-	161, 134	12X, 184	101, 141

Taiwan	110, 119	104, 105, 100	112	100, 108
Thailand	191, 195, 199	13, 183, 1350030	17XXX	101, 100

Key (C) closed scheme (ie no trunk prefix)

(*) X is a further operator-specific digit

(***) 11X range reserved for short codes, with possible regional harmonisation

National long-distance carrier selection code ranges (Asia-Pacific)

Australia 14X

Hong Kong 15X, 16X

Japan 007X, 008X

Malaysia 18X

North America 10XXX

Philippines 10X, 11X, 12X

South Korea 08X

Taiwan 01X

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National long-distance carrier selection code ranges (Europe)

Austria 10XY

Denmark 10XY

Finland 10X, 10XY, 105XY

France X (X not 1, 3 or 7)

Germany 010XY

Norway 1XY

Sweden 007, 009, 008X (moving to 1XX)

Switzerland 10XY

UK 1XY(Z), X mainly 2, 3, 4, 6, 8

Table A2 New services numbering in Asia-Pacific countries

	Cellular	Paging	Freephone	Premium rate
Australia	18, 4	16	180 (**)	190 (**)
Bangladesh				
Brunei	88	85		
Cambodia	1, 96	13/4 (**), 95	-	190 (**)
China	130,139 (G)	126,127; 191,192	10800	
CIS				
Fiji (C)	90	29	0800	
Hong Kong (C)	9	7	800	900
India	98	96		
Indonesia	82			
Japan	X0 (X=3,4,8,9)		120 (NTT)	990 (NTT)
Laos	20, 21	-	-	-
Macau (C)				
Malaysia				
Maldives		7		
Mongolia	98, 99; 110-5 (**)			
Myanmar	8, 9			

Nepal	98	-	-	-
New Zealand	2		800	900
North America	Various	Various	800	900
Pakistan	3	3	800	900
Papua N Guinea	912, 90			
Philippines	9XY	12X, 14X, 15X		
Singapore (C)	1626	1620	1800	1900
South Korea	1	1	80	-
Sri Lanka	7	-	-	-
Taiwan	90, 91, 92	50, 59, 60, 70	80, 81, 85	
Thailand	1	21	+800	-

Key (**) Local dialling range in open scheme (all other codes are in trunk dialling space, preceded by the trunk prefix (normally 0) in open schemes)

(G) Mobile phones also numbered within city geographic code

UPT numbering in Asia-Pacific

Australia 185 (**)

Cambodia 90X

Hong Kong 81-89

Japan X0 (X not 3, 5, 8)

Taiwan 99, 90

USA 500, 700

Other mobile services numbering in Asia-Pacific

Australia satellite services 14

Cambodia mobile radio 93

satellite & FPLMTS 94

Japan PHS 50

mobile radio 140

Taiwan paging, PCS 9X

Thailand mobile radio 8

USA various N8X, N9X (N=2-9, X=0-9)

Table A3 Shared cost and UPT numbering in European countries

	Shared cost	UPT
Austria	67, 7, 9	878
Belgium	7815	70
Denmark (C)	70	70
Finland	-	78
France (C)	801/2/3	804
Germany	180, 900	700
Hungary	40, 41	-
Ireland (**)	1850, 1890	-
Italy (**)	147	-
Netherlands	68, 90	87
Norway	810	880
Portugal	808	-

Slovak Republic	8	700
Spain	901, 902	904
Sweden	77	70
Switzerland	84	700, 878
United Kingdom	345, 645, 990, 8	70

Note: all these codes are preceded by the trunk prefix (normally 0) in schemes which have one.

(C) Closed scheme (no trunk prefix).