# TSG-RAN Meeting #9 Hawaii, U.S.A. , 20-22 September 2000

Title: Agreed CRs to TS 25.221

Source: TSG-RAN WG1

Agenda item: 5.1.3

No.	R1 T-doc	Spec	CR	Rev	Subject	Cat	Current	New
1	R1-000921	25.221	022	1	Correction to midamble generation in UTRA TDD	F	3.3.0	3.4.0
2	R1-001105	25.221	026	2	Some corrections for TS25.221	F	3.3.0	3.4.0
3	R1-000940	25.221	028	-	Terminology regarding the beacon function	F	3.3.0	3.4.0
4	R1-001000	25.221	030	1	TDD Access Bursts for HOV	F	3.3.0	3.4.0
5	R1-001089	25.221	031	1	Number of codes signalling for the DL common midamble case	F	3.3.0	3.4.0

3GPP TSG RA Hawaii, USA, 2	e					R1-00-092 3GPP use the format TP r SMG, use the format P-	-99xxx
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		25.221	CR	022r1	Current Versi	on: <mark>3.3.0</mark>	
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Source:	TSG RAN V	VG1			Date:	04/07/2000	
Subject:	Correction t	<mark>o midamble gene</mark>	ration in l	JTRA TDD			
Work item:							
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Other comments:							

## 5.2.3 Training sequences for spread bursts

In this subclause, the training sequences for usage as midambles in burst type 1 and burst type 2 (see subclause 5.2.2) are defined. The training sequences, i.e. midambles, of different users active in the same cell and same time slot are cyclically shifted versions of one single basic midamble code. The applicable basic midamble codes are given in Annex A.1 and A.2. As different basic midamble codes are required for different burst formats, the Annex A.1 shows the basic midamble codes  $\mathbf{m}_{PL}$  for burst type 1 and Annex and A.2 shows  $\mathbf{m}_{PS}$  for burst type 2. It should be noted that the different burst types must not be mixed in the same timeslot of one cell.

The basic midamble codes in Annex A.1 and A.2 are listed in hexadecimal notation. The binary form of the basic midamble code shall be derived according to table 5 below.

4 binary elements $M_i$	Mapped on hexadecimal digit
-1 -1 -1 -1	0
-1 -1 -1 1	1
-1 -1 1 –1	2
-1 -1 1 1	3
-1 1 -1 -1	4
-1 1 -1 1	5
-1 1 1 -1	6
-1 1 1 1	7
1 -1 -1 –1	8
1 -1 -1 1	9
1 -1 1 -1	А
1 -1 1 1	В
1 1 -1 -1	С
1 1 -1 1	D
1 1 1 -1	E
1 1 1 1	F

Table 5: Mapping of 4 binary elements  $m_i$  on a single hexadecimal digit

For each particular basic midamble code, its binary representation can be written as a vector  $\mathbf{m}_{\rm p}$  :

$$\mathbf{m}_{\mathrm{P}} = \left( m_1, m_2, \dots, m_P \right) \tag{1}$$

According to Annex A.1, the size of this vector  $\mathbf{m}_{\rm P}$  is P=456 for burst type 1. Annex A.2 is setting P=192 for burst type 2. As QPSK modulation is used, the training sequences are transformed into a complex form, denoted as the complex vector  $\mathbf{m}_{\rm P}$ :

$$\underline{\mathbf{m}}_{\mathrm{P}} = \left(\underline{m}_{1}, \underline{m}_{2}, \dots, \underline{m}_{P}\right) \tag{2}$$

The elements  $\underline{m}_i$  of  $\underline{\mathbf{m}}_{\mathbf{p}}$  are derived from elements  $m_i$  of  $\mathbf{m}_{\mathbf{p}}$  using equation (3):

$$\underline{m}_i = (\mathbf{j})^i \cdot m_i \text{ for all } i = 1, \dots, P$$
(3)

Hence, the elements  $\underline{m}_i$  of the complex basic midamble code are alternating real and imaginary.

To derive the required training sequences, this vector  $\underline{\mathbf{m}}_{P}$  is periodically extended to the size:

$$i_{\max} = L_m + (K'-1)W + \lfloor P/K \rfloor$$
<sup>(4)</sup>

Notes on equation (4):

- K', W and P taken from Annex A.1 or A.2 according to burst type and thus to length of midamble L<sub>m</sub>
- K=2K'

-  $\lfloor x \rfloor$  denotes the largest integer smaller or equal to x

So we obtain a new vector  $\mathbf{\underline{m}}$  containing the periodic basic midamble sequence:

$$\underline{\mathbf{m}} = \left(\underline{m}_1, \underline{m}_2, \dots, \underline{m}_{i_{\max}}\right) = \left(\underline{m}_1, \underline{m}_2, \dots, \underline{m}_{L_m + (K'-1)W + \lfloor P/K \rfloor}\right)$$
(5)

The first P elements of this vector  $\underline{\mathbf{m}}$  are the same ones as in vector  $\underline{\mathbf{m}}_{P}$ , the following elements repeat the beginning:

$$\underline{m}_{i} = \underline{m}_{i-P} \text{ for the subset } i = (P+1), \dots, i_{\max}$$
(6)

Using this periodic basic midamble sequence  $\underline{\mathbf{m}}$  for each user k a midamble  $\underline{\mathbf{m}}^{(k)}$  of length  $L_m$  is derived, which can be written as a user specific vector:

$$\underline{\mathbf{m}}^{(k)} = \left(\underline{m}_1^{(k)}, \underline{m}_2^{(k)}, \dots, \underline{m}_{L_m}^{(k)}\right)$$
(7)

The L<sub>m</sub> midamble elements  $\underline{m}_{i}^{(k)}$  are generated for each midamble of the first K' users (k = 1,...,K') based on:

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K'-k)W} \text{ with } i = 1, \dots, L_{m} \text{ and } k = 1, \dots, K'$$
(8)

The elements of midambles for the second K' users (k = (K'+1),...,K = (K'+1),...,2K') are generated based on a slight modification of this formula introducing intermediate shifts:

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K-k)W+\lfloor P/K \rfloor} \text{ with } i = 1, ..., L_{m} \text{ and } k = K'+1, ..., K - 1$$
(9)  

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K-k-1)W+\lfloor P/K \rfloor} \text{ with } i = 1, ..., L_{m} \text{ and } k = K'+1, ..., K-1$$
(9)  

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K'-1)W+\lfloor P/K \rfloor} \text{ with } i = 1, ..., L_{m} \text{ and } k = K$$
(10)

Whether intermediate shifts are allowed in a cell is broadcast on the BCH.

The midamble sequences derived according to equations (7) to (910) have complex values and are not subject to channelisation or scrambling process, i.e. the elements  $\underline{m}_i^{(k)}$  represent complex chips for usage in the pulse shaping process at modulation.

The term 'a midamble code set' or 'a midamble code family' denotes K specific midamble codes  $\underline{\mathbf{m}}^{(k)}$ ; k=1,...,K, based on a single basic midamble code  $\mathbf{m}_{p}$  according to (1).

1

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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<----- double-click here for help and instructions on how to create a CR.

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

6

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- [1] 3G TS 25.201: "Physical layer general description".
- [2] 3G TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [3] 3G TS 25.212: "Multiplexing and channel coding (FDD)".
- [4] 3G TS 25.213: "Spreading and modulation (FDD)".
- [5] 3G TS 25.214: "Physical layer procedures (FDD)".
- [6] 3G TS 25.215: "Physical layer Measurements (FDD)".
- [7] 3G TS 25.222: "Multiplexing and channel coding (TDD)".
- [8] 3G TS 25.223: "Spreading and modulation (TDD)".
- [9] 3G TS 25.224: "Physical layer procedures (TDD)".
- [10] 3G TS 25.225: "Physical layer Measurements (TDD)".
- [11] 3G TS 25.301: "Radio Interface Protocol Architecture".
- [12] 3G TS 25.302: "Services Provided by the Physical Layer".
- [13] 3G TS 25.401: "UTRAN Overall Description".
- [14] 3G TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [15] 3G TS 25.304: "-UE Procedures in Idle Mode and Procedures for Cell Reselection in Connected Mode".
- [16] 3G TS 25.427: "UTRAN Iur and Iub interface user plane protocols for DCH data streams".

For the purposes of the present document, the following abbreviations apply:

DCU	David Local Channel
BCH	Broadcast Channel
CCPCH	Common Control Physical Channel
CCTrCH	Coded Composite Transport Channel
CDMA	Code Division Multiple Access
DPCH	Dedicated Physical Channel
DRX	Discontinuous Reception
DSCH	Downlink Shared Channel
FACH	Forward Access Channel
FDD	Frequency Division Duplex
FEC	Forward Error Correction
GP	Guard Period
GSM	Global System for Mobile Communication
NRT	Non-Real Time
OVSF	Orthogonal Variable Spreading Factor
P-CCPCH	Primary CCPCH
PCH	Paging Channel
PDSCH	Physical Downlink Shared Channel
PDU	Protocol Data Unit
PI	Paging Indicator (value calculated by higher layers)
PICH	Pageing Indicator Channel
<u>P_</u>	Paging Indicator (indicator set by physical layer)
PRACH	Physical Random Access Channel
PUSCH	Physical Uplink Shared Channel
RACH	Random Access Channel
RLC	
RF	Radio Frame
RT	Real Time
S-CCPCH	Secondary CCPCH
SCH	Synchronisation Channel
SFN	Cell System Frame Number
TCH	Traffic Channel
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TrCH	Transport Channel
UE	<u>User Equipment</u>
USCH	Uplink Shared Channel

# 4 <u>Services offered to higher layers</u>Transport channels

# 4.1 Transport channels

Transport channels are the services offered by layer 1 to the higher layers. A transport channel is defined by how and with what characteristics data is transferred over the air interface. A general classification of transport channels is into two groups:

- Dedicated Channels, using inherent addressing of UE
- Common Channels, using explicit addressing of UE if addressing is needed

General concepts about transport channels are described in [12]3GPP RAN TS 25.302 (L2 specification).

# 4.<u>1.</u>1 Dedicated transport channels

The Dedicated Channel (DCH) is an up- or downlink transport channel that is used to carry user or control information between the UTRAN and a UE.

# 4.<u>1.</u>2 Common transport channels

There are six types of transport channels: BCH, FACH, PCH, RACH, USCH, DSCH

# 4.1.2.1 BCH - Broadcast Channel

The Broadcast Channel (BCH) is a downlink transport channel that is used to broadcast system- and cell-specific information.

# 4.<u>1.</u>2.2 FACH – Forward Access Channel

The Forward Access Channel (FACH) is a downlink transport channel that is used to carry control information to a mobile station when the system knows the location cell of the mobile station. The FACH may also carry short user packets.

# 4.<u>1.</u>2.3 PCH – Paging Channel

The Paging Channel (PCH) is a downlink transport channel that is used to carry control information to a mobile station when the system does not know the location cell of the mobile station.

# 4.<u>1.</u>2.4 RACH – Random Access Channel

The Random Access Channel (RACH) is an up link transport channel that is used to carry control information from mobile station. The RACH may also carry short user packets.

# 4.1.2.5 USCH – Uplink Shared Channel

The uplink shared channel (USCH) is an uplink transport channel shared by several UEs carrying dedicated control or traffic data.

# 4.<u>1.</u>2.6 DSCH – Downlink Shared Channel

The downlink shared channel (DSCH) is a downlink transport channel shared by several UEs carrying dedicated control or traffic data.

# 4.2 Indicators

Indicators are means of fast low-level signalling entities which are transmitted without using information blocks sent over transport channels. The meaning of indicators is implicit to the receiver.

The indicator(s) defined in the current version of the specifications are: Paging Indicator.

The uplink timeslot format depends on the spreading factor, midamble length and on the number of the TFCI bits. Due to TPC, different amount of bits are mapped to the two data fields. The timeslot formats are depicted in the table 4b.

14

Slot	Spreadin	Midambl	N <sub>TFCI</sub>	N <sub>TPC</sub>	Bits/sl	N <sub>Data/Slo</sub>	N <sub>data/data</sub>	N <sub>data/data</sub>
Format #	g Factor	e length	(bits)	(bits)	ot	t (bits)	field(1)	field(2)
	40	(chips)	0	0	0.4.4	0.4.4	· · /	(bits)
0	16	512	0	0	244	244	122	122
<u>51</u>	16	512	0	2	244	242	122	120
<u>2</u> 6	16	512	4	2	244	238	120	118
<u>3</u> 7 48	16	512	8	2	244	234	118	116
	16	512	16	2	244	226	114	112
<u>5</u> 9	16	512	32	2	244	210	106	104
<u>6</u> 10	16	256	0	0	276	276	138	138
<u>7</u> <del>15</del>	16	256	0	2	276	274	138	136
<u>8</u> 16	16	256	4	2	276	270	136	134
<u>9</u> 17	16	256	8	2	276	266	134	132
1 <u>0</u> 8	16	256	16	2	276	258	130	128
1 <u>1</u> 9	16	256	32	2	276	242	122	120
<u>12</u> 20	8	512	0	0	488	488	244	244
<u>13</u> 25	8	512	0	2	488	486	244	242
<u>14<del>26</del></u>	8	512	4	2	488	482	242	240
<u>15</u> 27	8	512	8	2	488	478	240	238
<u>16</u> 28	8	512	16	2	488	470	236	234
<u>17</u> 29	8	512	32	2	488	454	228	226
<u>18</u> 30	8	256	0	0	552	552	276	276
<u>19</u> 35	8	256	0	2	552	550	276	274
<u>20</u> 36	8	256	4	2	552	546	274	272
<u>21</u> <del>37</del>	8	256	8	2	552	542	272	270
<u>22</u> 38	8	256	16	2	552	534	268	266
<u>23</u> 39	8	256	32	2	552	518	260	258
<u>24</u> 40	4	512	0	0	976	976	488	488
<u>25</u> 4 <del>5</del>	4	512	0	2	976	974	488	486
<u>26</u> 4 <del>6</del>	4	512	4	2	976	970	486	484
<u>27</u> 4 <del>7</del>	4	512	8	2	976	966	484	482
<u>28</u> 4 <del>8</del>	4	512	16	2	976	958	480	478
<u>29</u> 4 <del>9</del>	4	512	32	2	976	942	472	470
<u>30</u> 50	4	256	0	0	1104	1104	552	552
<u>31</u> 55	4	256	0	2	1104	1102	552	550
<u>32</u> 56	4	256	4	2	1104	1098	550	548
<u>33</u> 57	4	256	8	2	1104	1094	548	546
<u>34</u> 58	4	256	16	2	1104	1086	544	542
<u>35</u> 59	4	256	32	2	1104	1070	536	534
<u>36</u> 60	2	512	0	0	1952	1952	976	976
37 <del>65</del>	2	512	0	2	1952	1950	976	974
38 <del>66</del>	2	512	4	2	1952	1946	974	972
<u>39</u> 67	2	512	8	2	1952	1942	972	970
4068	2	512	16	2	1952	1934	968	966
<u>4169</u>	2	512	32	2	1952	1918	960	958
<u>4270</u>	2	256	0	0	2208	2208	1104	1104
4375	2	256	0	2	2208	2206	1104	1102
44 <del>76</del>	2	256	4	2	2208	2202	1102	1100
4577	2	256	8	2	2208	2198	1100	1098
46 <del>78</del>	2	256	16	2	2208	2190	1096	1094
47 <del>79</del>	2	256	32	2	2208	2174	1088	1086

## Table 4b: Timeslot formats for the Uplink

Slot Format #	Spreadin g Factor	Midambl e length (chips)	N <sub>TFCI</sub> (bits)	N <sub>TPC</sub> (bits)	Bits/sl ot	N <sub>Data/Slo</sub> t (bits)	N <sub>data/data</sub> <sup>field(1)</sup> (bits)	N <sub>data/data</sub> <sup>field(2)</sup> (bits)
<u>48</u> 80	1	512	0	0	3904	3904	1952	1952
<u>49</u> 85	1	512	0	2	3904	3902	1952	1950
<u>50</u> 86	1	512	4	2	3904	3898	1950	1948
<u>51</u> 87	1	512	8	2	3904	3894	1948	1946
<u>52</u> 88	1	512	16	2	3904	3886	1944	1942
<u>53</u> 89	1	512	32	2	3904	3870	1936	1934
<u>54</u> 90	1	256	0	0	4416	4416	2208	2208
<u>55</u> 95	1	256	0	2	4416	4414	2208	2206
<u>56</u> 96	1	256	4	2	4416	4410	2206	2204
<u>57</u> 97	1	256	8	2	4416	4406	2204	2202
<u>58</u> 98	1	256	16	2	4416	4398	2200	2198
<u>59</u> 99	1	256	32	2	4416	4282	2192	2190

## 5.3.1.3 P-CCPCH Training sequences

The training sequences, i.e. midambles, as described in subclause 5.2.3 are used for the P-CCPCH. For those timeslots in which the P-CCPCH is transmitted, the midambles  $m^{(1)}$ , and  $m^{(2)}$ ,  $m^{(9)}$  and  $m^{(10)}$  are reserved for P-CCPCH in order to support Block STTD antenna diversity and the beacon function, see 5.-4 and 5.5. The use of midambles depends on whether Block STTD is applied to the P-CCPCH:

- If no antenna diversity is applied to P-CCPCH, m<sup>(1)</sup> is used and m<sup>(2)</sup> is left unused;
- If Block STTD antenna diversity is applied to P-CCPCH, m<sup>(1)</sup> is used for the first antenna and m<sup>(2)</sup> is used for the diversity antenna.

The midambles m<sup>(9)</sup> and m<sup>(10)</sup> are always left unused in the P-CCPCH time slots.

# 5.3.4 The synchronisation channel (SCH)

In TDD mode code group of a cell can be derived from the synchronisation channel. In order not to limit the uplink/downlink asymmetry the SCH is mapped on one or two downlink slots per frame only.

There are two cases of SCH and P-CCPCH allocation as follows:

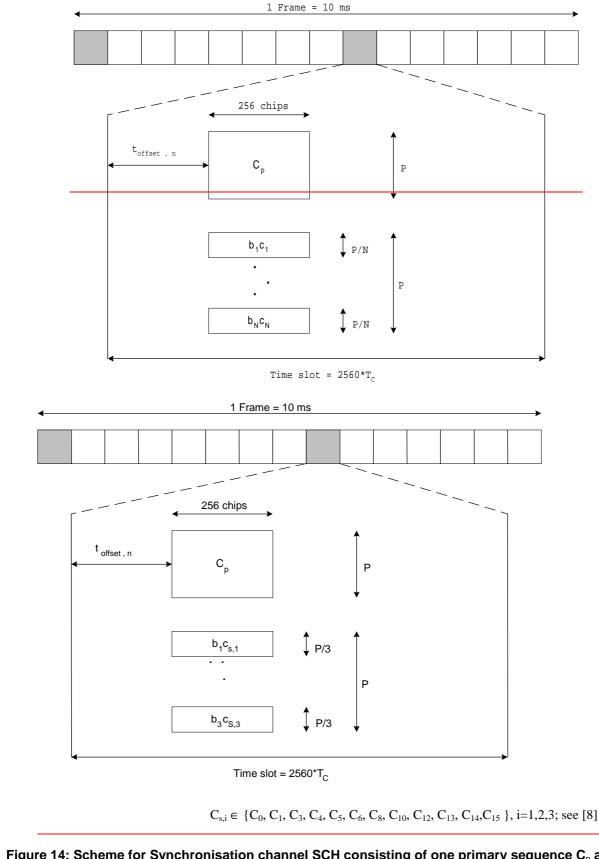
Case 1) SCH and P-CCPCH allocated in TS#k, k=0....14

Case 2) SCH allocated in two TS: TS#k and TS#k+8, k=0...6; P-CCPCH allocated in TS#k.

The position of SCH (value of k) in frame can change on a long term basis in any case.

Due to this SCH scheme, the position of P-CCPCH is known from the SCH.

Figure 14 is an example for transmission of SCH, k=0, of Case 2.



# Figure 14: Scheme for Synchronisation channel SCH consisting of one primary sequence C<sub>p</sub> and N=3 parallel secondary sequences <u>C<sub>s.i.</sub></u> in slot k and k+8 <u>(example for k=0 in Case 2)</u>

### (example for k=0 in Case 2)

As depicted in figure 14, the SCH consists of a primary and three secondary code sequences with 256 chips length. The primary and secondary code sequences are defined in [8] clause 7 'Synchronisation codes'.

The time offset  $t_{offset}$  is one of 32 values, depending on the cell parameter, thus on the code group of the cell, cf. 'table 6 Mapping scheme for Cell Parameters, Code Groups, Scrambling Codes, Midambles and  $t_{offset}$ ' in [8]. Note that the cell parameter will change from frame to frame, cf. 'Table 7 Alignment of cell parameter cycling and system frame number' in [8], but the cell will belong to only one code group and thus have one time offset  $t_{offset}$ . The exact value for  $t_{offset}$ , regarding column 'Associated  $t_{offset}$ ' in [8] is given by:

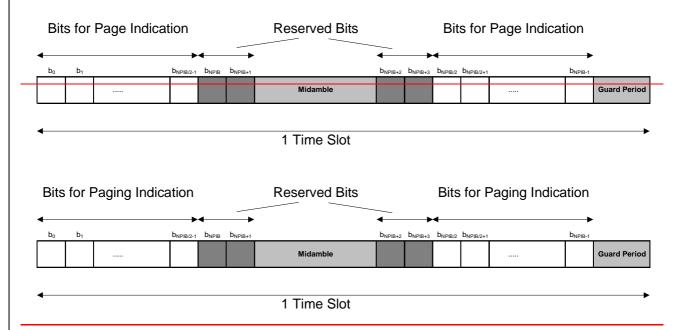
$$t_{offset,n} = n \cdot T_c \left[ \frac{2560 - 96 - 256}{31} \right]$$
  
=  $n \cdot 71T_c$ ;  $n = 0, ..., 31$ 

Please note that  $\lfloor x \rfloor$  denotes the largest integer number less or equal to x and that T<sub>c</sub> denotes the chip duration.

# 5.3.7 The Paginge Indicator Channel (PICH)

The Paginge Indicator Channel (PICH) is a physical channel used to carry the Ppaginge iIndicators (PI). The PICH is always transmitted at the same reference power level as the P-CCPCH.

Figure 15 depicts the structure of a PICH burst and the numbering of the bits within the burst. The same burst type is used for the PICH in every cell.  $N_{PIB}$  bits in a normal burst of type 1 or 2 are used to carry the <u>Ppaging Iindicators</u>, where  $N_{PIB}$  depends on the burst type:  $N_{PIB}=240$  for burst type 1 and  $N_{PIB}=272$  for burst type 2. The bits  $b_{NPIB}$ ,...,  $b_{NPIB+3}$  adjacent to the midamble are reserved for possible future use. They shall be set to 0 and transmitted with the same power as the <u>Ppaging Iindicator</u> carrying bits.



### Figure 15: Transmission and <u>n</u>umbering of <u>Ppaging lindicator</u> carrying <u>b</u>Bits in a PICH burst

In each time slot,  $N_{PI}$  paginge indicators are transmitted, using of length  $L_{PI}=42$ ,  $L_{PI}=8-4$  or  $L_{PI}=16.8$  bits symbols are transmitted in one time slot.  $L_{PI}$  is called the paging indicator length. The number of paginge indicators  $N_{PI}$  per time slot is given by the paging indicator length the number  $L_{PI}$  of bits for the page indicators and the burst type, which are both known by higher layer signalling. In table 8 this number is shown for the different possibilities of burst types and paging indicator PI lengths.

### Table 8: Number $N_{Pl}$ of <u>paging indicators</u> Pl per time slot for the different burst types and <u>paging</u> <u>indicator</u> Pl lengths $L_{Pl}$

	L <sub>PI</sub> =4 <u>2</u>	L <sub>PI</sub> = <mark>84</mark>	L <sub>PI</sub> = <mark>16</mark> 8
Burst Type 1	N <sub>PI</sub> =60	N <sub>PI</sub> =30	N <sub>PI</sub> =15
Burst Type 2	N <sub>PI</sub> =68	N <sub>PI</sub> =34	N <sub>PI</sub> =17

As shown in figure 16, the  $\frac{Ppaginge Iindicators}{Ppaginge iIndicators}$  of N<sub>PICH</sub> consecutive frames form a PICH block, N<sub>PICH</sub> is configured by higher layers. Thus, N<sub>P</sub>=N<sub>PICH</sub>\*N<sub>PI</sub>  $\frac{Ppaginge II}{Ppaginge II}$  dicators are transmitted in each PICH block.

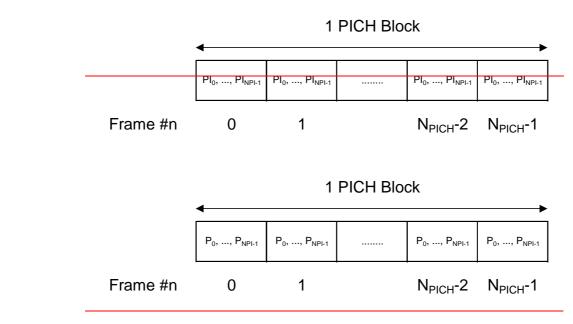


Figure 16: Structure of a PICH block

The <u>value</u> PI (<u>PI = 0, ..., N<sub>P</sub>-1</u>) calculated by higher layers for use for a certain UE, see [15], is <u>associated mapped</u> to the <u>Ppaginge Ii</u>ndicator PI<sub>pq</sub> in the nth frame of one PICH block, where <u>pq</u> is given by

 $\mathbf{p} \cdot \mathbf{q} = \mathbf{PI} \mod \mathbf{N}_{\mathbf{PI}}$ 

and n is given by

 $n = PI div N_{PI}$ .

The PI bitmap in the PCH data frames over Iub contains indication values for all possible higher layer PI values, see [16]. Each bit in the bitmap indicates if the paging indicator  $P_q$  associated with that particular PI shall be set to 0 or 1. Hence, the calculation in the formulas above is to be performed in Node B to make the association between PI and  $P_q$ .

The <u>pPaginge</u> <u>iIndicator</u>  $PI_{pq}$  in one time slot is mapped to the bits { $b_{Lpi^*pq},...,b_{Lpi^*pq+Lpi-1}, b_{NPIB/2+Lpi^*pq},...,b_{NPIB/2+Lpi^*pq+Lpi-1}$ } within this time slot, as exemplary shown in figure 17. Thus, half of the <u>LPI</u> symbols used for each paging indicator are transmitted in the first data part, and the other half of the <u>LPI</u> symbols are transmitted in the second data part.

The coding of the paging indicator  $P_q$  is given in [7].

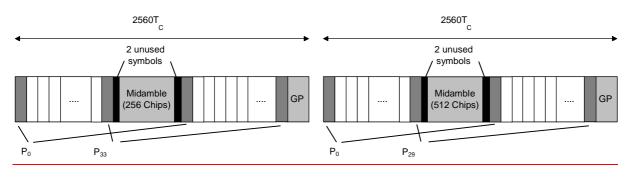


Figure 17: Example of mapping of paging indicators on PICH bits for L<sub>PI</sub>=4

25

## 5.5.2 Physical characteristics of the beacon function

The physical channels providing the beacon function:

- are transmitted with reference power;
- are transmitted without beamforming;
- use burst type 1;
- use midamble  $\underline{m} \mathbf{m}^{(1)}$  and  $\mathbf{m}^{(2)}$  exclusively in this time slot; and
- midambles  $\underline{m}^{(9)}$  and  $\underline{m}^{(10)}$  are always left unused in this time slot, if 16 midambles are allowed in that cell.

Note that in the time slot where the P-CCPCH is transmitted only the midambles  $m^{(1)}$  to  $m^{(8)}$  shall be used, see 5.6.1. Thus, midambles  $m^{(9)}$  and  $m^{(10)}$  are always left unused in this time slot.

The reference power corresponds to the sum of the power allocated to both midambles  $\underline{m}^{(1)}$  and  $\underline{m}^{(2)}$ . Two possibilities exist:

- If no Block STTD antenna diversity is applied to P-CCPCH, all the reference power of any physical channel providing the beacon function is allocated to m<sup>(1)</sup>.
- If Block STTD antenna diversity is applied to P-CCPCH, for any physical channel providing the beacon function midambles m<sup>(1)</sup> and m<sup>(2)</sup> are each allocated half of the reference power. Midamble m<sup>(1)</sup> is used for the first antenna and m<sup>(2)</sup> is used for the diversity antenna. Block STTD encoding is used for the data in P-CCPCH, see [9]; for all other physical channels identical data sequences are transmitted on both antennas.

# 5.6.1 Midamble Allocation for DL Physical Channels

Physical channels providing the beacon function shall always use the reserved midambles  $\underline{m^{(1)}}$  and  $\underline{m^{(2)}}$ , see 5.4. For all other DL physical channels the midamble allocation is signalled or given by default.

# 6 Mapping of transport channels to physical channels

This clause describes the way in which transport channels are mapped onto physical resources, see figure  $1\frac{87}{2}$ .

Transport Channels DCH	Physical Channels Dedicated Physical Channel (DPCH)
всн	Primary Common Control Physical Channel (P-CCPCH)
FACH ————————————————————————————————————	Secondary Common Control Physical Channel (S-CCPCH)
RACH	Physical Random Access Channel (PRACH)
USCH	Physical Uplink Shared Channel (PUSCH)
DSCH	Physical Downlink Shared Channel (PDSCH)
	Paginge Indicator Channel (PICH)
	Synchronisation Channel (SCH)

## Figure 17 Figure 18: Transport channel to physical channel mapping

# 6.1 Dedicated Transport Channels

A dedicated transport channel is mapped onto one or more physical channels. An interleaving period is associated with each allocation. The frame is subdivided into slots that are available for uplink and downlink information transfer. The mapping of transport blocks on physical channels is described in TS 25.222 ("multiplexing and channel coding").

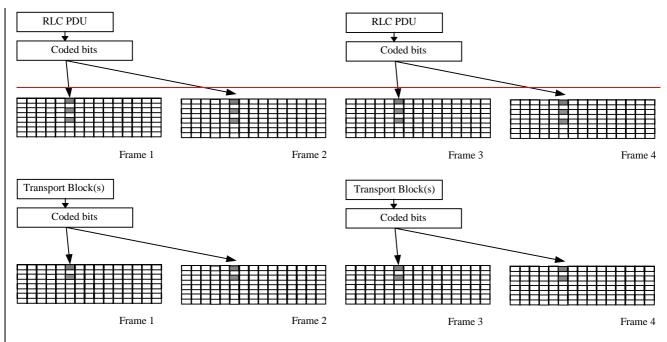


Figure 198: Mapping of Transport BlocksPDU onto the physical bearer

For NRT packet data services, shared channels (USCH and DSCH) can be used to allow efficient allocations for a short period of time.

#### 6.2.1 The Broadcast Channel (BCH)

The BCH is mapped onto the P-CCPCH. The secondary SCH indicates in which timeslot a mobile can find the P-CCPCH containing BCH. If the broadcast information requires more resources than provided by the P CCPCH, the BCH in P-CCPCH will comprise a pointer to additional S-CCPCH resources for FACH in which this additional broadcast information shall be sent.

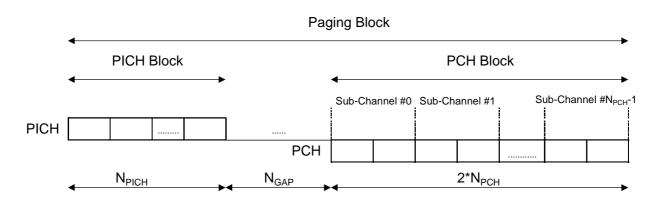
#### 6.2.2 The Paging Channel (PCH)

The PCH is mapped onto one or several S-CCPCHs so that capacity can be matched to requirements. The location of the PCH is indicated on the BCH. It is always transmitted at a reference power level.

To allow an efficient DRX, the PCH is divided into PCH blocks, each of which comprising N<sub>PCH</sub> paging sub-channels. N<sub>PCH</sub> is configured by higher layers. Each paging sub-channel is mapped onto 2 consecutive PCH frames within one PCH block. Layer 3 information to a particular UE is transmitted only in the paging sub-channel, that is assigned to the UE by higher layers, see [15]. The assignment of UEs to paging sub-channels is independent of the assignment of UEs to page indicators.

#### 6.2.2.1 PCH/PICH Association

As depicted in figure 2019, a paging block consists of one PICH block and one PCH block. If a pPaginge iIndicator in a certain PICH block is set to '1' it is an indication that UEs associated with this pPaginge iIndicator shall read their corresponding paging sub-channel within the same paging block. The value N<sub>GAP</sub>>0 of frames between the end of the PICH block and the beginning of the PCH block is configured by higher layers.



## Figure 2019: Paging Sub-Channels and Association of PICH and PCH blocks

28

In the following figures B.1 to B.3 some examples for Multiframe Structures on Primary and Secondary CCPCH are given. The figures show the placement of Common Transport Channels on the Common Control Physical Channels. Additional S-CCPCH capacity can be allocated on other codes and timeslots of course, e.g. FACH capacity is related to overall cell capacity and can be configured according to the actual needs. Channel capacities in the annex are derived using bursts with long midambles (Burst format 1). Every TrCH-box in the figures is assumed to be valid for two frames (see row 'Frame #'), i.e. the transport channels in CCPCHs have an interleaving time of 20msec.

The actual CCPCH Multiframe Scheme used in the cell is described and broadcast on BCH. Thus the system information structure has its roots in this particular transport channel and allocations of other Common Channels can be handled this way, i.e. by pointing from BCH.

Frame #	0-1	2-3	4-5	<del>67</del>	8.9	<del>10</del> 11	<del>12</del> <del>13</del>	14 15	<del>16</del> 17	<del>18</del> <del>19</del>	20 21	22 23	24 25	26 27	28 29	<del>30</del> <del>31</del>	<del>32</del> 33	34 35	<del>36</del> <del>37</del>	<del>38</del> <del>39</del>	40 41	4 <del>2</del> 43	44 45	4 <del>6</del> 47	48 49	50 41	<del>52</del> 53	54 55	<del>56</del> 57	<del>58</del> <del>59</del>	60 61	<del>62</del> <del>63</del>	64 65	66 67		<del>70</del> 71
CCPCHs in TS k, Code 0																																				
CCPCHs in TS k+8, Co 0																																				
BCH transporting BCCH	[ <u>2,7</u> ]	<del>1 kt</del>	<del>ops</del>				FA	<b>CH</b>	tra	nspe	ortin	g B	CCI	<del>12,</del>	<del>71 k</del>	<del>bps</del>					PC	<del>H 13</del>	<del>3,5k</del>	<del>bps</del>			PI	CH	2,71	-kbj	<del>ps</del>	Ŧ	FAC	<del>H 2</del> ′	<del>7,1 k</del>	<del>bps</del>
	F	<del>igu</del>	<del>Ire B</del>	<del>3.1:</del>	Exa	mp	<del>le fo</del>	<del>r a</del>	mul	tifra	<del>ime</del>	stru	ictu	<del>ıre f</del>	<del>or (</del>	CP	CHe	<del>s th</del> a	at is	<del>re</del> r	oeat	ed e	eve	ry 7:	2th	fran	ne									
Frame #	0-1	2-3	4-5	<del>67</del>	89	<del>10</del> 11	<del>12</del> 13	14 15	<del>16</del> <del>17</del>	<del>18</del> <del>19</del>	20 21	22 23	24 25	<del>26</del> 27	<del>28</del> <del>29</del>	<del>30</del> 31	<del>32</del> 33	<del>34</del> 35	<del>36</del> 37	<del>38</del> <del>39</del>	40 41	4 <del>2</del> 43	44 45	<del>46</del> 47	48 49	<del>50</del> 41	<del>52</del> 53	54 55	<del>56</del> 57	<del>58</del> <del>59</del>	60 61	<del>62</del> 63	64 65	<del>66</del> 67	<del>68</del> <del>69</del>	<del>70</del> 71
CCPCHs in TS k, Code 0																																				
CCPCHs in TS k, Code n																																				
CCPCHs in TS k+8, Co 0																																				
BCH transporting BCCH	<u>12,7</u>	<del>1 kt</del>	<del>эрs</del>				FA	<del>CH</del>	tra	nspe	ortin	g B	CCI	<del>12,</del>	<del>71 k</del>	<del>bps</del>					PC	H 13	<del>3,5k</del>	<del>bps</del>			PI	CH	2,71	- <mark>kb</mark> j	<del>ps</del>	Ŧ	FAC	H 5	<del>1,5 k</del>	<del>bp</del>
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3G TS 25.221 V3.3.0 (2000-06)

Frame #	<u>01</u>	<u>23</u>	<u>45</u>	<u>67</u>	<u>89</u>	<u>10</u> <u>11</u>	$\frac{\underline{12}}{\underline{13}}$	$\frac{\underline{14}}{\underline{15}}$	<u>16</u> <u>17</u>	<u>18</u> <u>19</u>	$\frac{\underline{20}}{\underline{21}}$	<u>22</u> <u>23</u>	<u>24</u> <u>25</u>	<u>26</u> <u>27</u>	<u>28</u> <u>29</u>	$\frac{\underline{30}}{\underline{31}}$	<u>32</u> <u>33</u>	<u>34</u> <u>35</u>	<u>36</u> <u>37</u>	<u>38</u> <u>39</u>	$\frac{\underline{40}}{\underline{41}}$	$\frac{42}{43}$	<u>44</u> <u>45</u>	<u>46</u> <u>47</u>	<u>48</u> <u>49</u>	<u>50</u> <u>41</u>	<u>52</u> <u>53</u>	<u>54</u> <u>55</u>	<u>56</u> <u>57</u>	<u>58</u> <u>59</u>	<u>60</u> <u>61</u>	<u>62</u> <u>63</u>
CCPCHs in TS k, Code 0																																
CCPCHs in TS k+8, Code 0																																
	BCH	12,	<u>2 kb</u>	<u>ps</u>		<u>F</u>	ACH	<u>1 25</u>	<u>,93</u>	<u>kbp</u>	<u>s</u>		<u>PC</u>	<u>H 9,</u>	15 k	<u>tbps</u>		<u>P</u>	ICH	1,5	<u>3 kb</u>	<u>ps</u>										
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CCPCHs in TS k+8, Code 0																				_												
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Figure B.2: Example for a multiframe structure for CCPCHs and PICH that is repeated every 64th frame, n=1...7

# 3GPP TSG RAN Meeting #9

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Hawaii, USA, 20-22 September 2000

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# 5.5 Beacon characteristicsfunction of physical channels

For the purpose of measurements, a beacon function shall be provided by particular physical channels at particular locations (time slot, code) shall have particular physical characteristics, called beacon characteristics. Physical channels with beacon characteristics are called beacon channels. The locations of the beacon channels are called beacon locations. The ensemble of beacon channels shall provide the beacon function, i.e. a reference power level at the beacon locations, regularly existing in each radio frame. Thus, beacon channels must be present in each radio frame.

## 5.5.1 Location of beacon physical channels with beacon function

The <u>beacon</u> locations of the physical channels with beacon function is are determined by the SCH and depends on the SCH allocation case, see 5.3.4:

- Case 1) The beacon function shall be provided by the All-physical channels that are allocated to channelisation code  $c_{\alpha=16}^{(k=1)}$  and to in TS#k, k=0....14, shall provide the beacon function.
- Case 2) The beacon function shall be provided by the All physical channels that are allocated to channelisation code  $c_{O=16}^{(k=1)}$  and to in-TS#k and TS#k+8, k=0...6, shall provide the beacon function.

Note that by this definition the P-CCPCH always has provides the beacon characteristicsfunction.

## 5.5.2 Physical characteristics of the beacon channels function

The beacon physical channels shall have the following physical characteristics. They providing the beacon function:

- are transmitted with reference power;
- are transmitted without beamforming;
- use burst type 1;
- use midamble  $m^{(1)}$  and  $m^{(2)}$  exclusively in this time slot; and
- midambles  $m^{(9)}$  and  $m^{(10)}$  are always left unused in this time slot, if 16 midambles are allowed in that cell.

The reference power corresponds to the sum of the power allocated to both midambles  $m^{(1)}$  and  $m^{(2)}$ . Two possibilities exist:

- If no Block STTD antenna diversity is applied to P-CCPCH, all the reference power of any <u>beacon physical</u> channel-<u>providing the beacon function</u> is allocated to m<sup>(1)</sup>.
- If Block STTD antenna diversity is applied to P-CCPCH, for any <u>beaconphysical</u> channel-providing the beacon function midambles m<sup>(1)</sup> and m<sup>(2)</sup> are each allocated half of the reference power. Midamble m<sup>(1)</sup> is used for the first antenna and m<sup>(2)</sup> is used for the diversity antenna. Block STTD encoding is used for the data in P-CCPCH, see [9]; for all other <u>beacon physical</u> channels identical data sequences are transmitted on both antennas.

# 5.6 Midamble Allocation for Physical Channels

In general, midambles are part of the physical channel configuration which is performed by higher layers.

Optionally, if no midamble is allocated by higher layers, a default midamble allocation shall be used. This default midamble allocation is given by a fixed association between midambles and channelisation codes, see clause A.3, and shall be applied individually to all channelisation codes within one time slot. Different associations apply for different burst types and cell configurations with respect to the maximum number of midambles.

# 5.6.1 Midamble Allocation for DL Physical Channels

<u>Beacon</u>Physical channels providing the beacon function shall always use the reserved midambles, see 5.4. For all other DL physical channels the midamble allocation is signalled or given by default.

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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<----- double-click here for help and instructions on how to create a CR.

Threewo types of bursts for dedicated physical channels are defined. : The burst type 1 and the burst type 2. Both <u>All of</u> them consist of two data symbol fields, a midamble and a guard period<del>, the lengths of which are different for the</del> individual burst types. Thus, the number of data symbols in a burst depends on the SF and the burst type, as depicted in table 1.

Spreading factor (SF)	Burst Type 1	Burst Type 2	Burst Type 3
<u>1</u>	<u>1952</u>	<u>2208</u>	<u>1856</u>
<u>2</u>	<u>976</u>	<u>1104</u>	<u>928</u>
4	<u>488</u>	<u>552</u>	464
<u>8</u>	<u>244</u>	<u>276</u>	<u>232</u>
<u>16</u>	<u>122</u>	<u>138</u>	<u>116</u>

## Table 1: Number of data symbols (N) for burst type 1, 2, and 3

The support of all three burst types is mandatory for the UE. The three different bursts defined here are well suited for different applications, as described in the following sections.

The bursts type 1 has a longer midamble of 512 chips than the burst type 2 with a midamble of 256 chips. Sample sets of midambles are given in subclause 5.2.3.1.

Because of the longer midamble, the burst type 1 is suited for the uplink, where up to 16 different channel impulse responses can be estimated. The burst type 2 can be used for the downlink and, if the bursts within a time slot are allocated to less than four users, also for the uplink.

## 5.2.2.1 Burst Type 1

Thus tThe burst type 1 can be used for uplink and downlink. Due to its longer midamble field this burst type supports the construction of a larger number of training sequences, see 5.2.3, which shall be used to estimate the different channels for different UEs in UL and, in case of TxDiversity or Beamforming, also in DL. The maximum number of training sequences depend on the cell configuration, see annex A. For the burst type 1 this number may be 4, 8, or 16.

-uplink, independent of the number of active users in one time slot;

<u>The data fields of the burst type 1 are 976 chips long. The corresponding number of symbols depends on the spreading factor, as indicated in table 1 above. The midamble of burst type 1 has a length of 512 chips. The guard period for the burst type 1 is 96 chip periods long. The burst type 1 is shown in Figure 4. The contents of the burst fields are described in table 2.</u>

## Table 2: The contents of the burst type 1 fields

Chip number (CN)	Length of field in chips	Length of field in symbols	Contents of field
<u>0-975</u>	<u>976</u>	Cf table 1	Data symbols
<u>976-1487</u>	<u>512</u>	<u>_</u>	<u>Midamble</u>
<u>1488-2463</u>	<u>976</u>	Cf table 1	Data symbols
<u>2464-2559</u>	<u>96</u>	<u>_</u>	Guard period

Data symbols 976 chips	Midamble 512 chips	Data symbols 976 chips	GP 96 CP
4	2560*T <sub>c</sub>		

Figure 4: Burst structure of the burst type 1. GP denotes the guard period and CP the chip periods

The burst type 2 offers a longer data field than burst type 1 on the cost of a shorter midamble. Due to the shorter midamble field the burst type 2 supports a maximum number of training sequences of 3 or 6 only, depending on the cell configuration, see annex A.can be used for

- uplink, if the bursts within a time slot are allocated to less than four users;

downlink, independent of the number of active users in one time slot.

The data fields of the burst type 1 are 976 chips long, whereas the data fields length of the burst type 2 are 1104 chips long. The corresponding number of symbols depends on the spreading factor, as indicated in table 1 <u>abovebelow</u>. The guard period for the burst type 1 and type 2 is 96 chip periods long.

The bursts type 1 and type 2 is are shown in Figure 4 and Figure 5. The contents of the burst fields are described in table 2 and table 3.

### Table 1: number of symbols per data field in bursts 1 and 2

Spreading factor (Q)	Number of symbols (N) per data field in Burst 1	Number of symbols (N) per data field in Burst 2
4	<del>976</del>	<del>1104</del>
2	<del>488</del>	<del>552</del>
4	<del>2</del> 44	<del>276</del>
8	<del>122</del>	<del>138</del>
<del>16</del>	<del>61</del>	<del>69</del>

### Table 2: The contents of the burst type 1 fields

Chip number (CN)	Length of field in chips	Length of field in symbols	Contents of field
<del>0-975</del>	<del>976</del>	<del>cf table 1</del>	Data symbols
<del>976-1487</del>	<del>512</del>	-	Midamble
<del>1488-2463</del>	<del>976</del>	<del>cf table 1</del>	Data symbols
<del>2464-2559</del>	<del>96</del>	-	Guard period

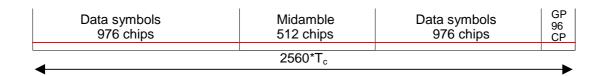


Figure 4: Burst structure of the burst type 1. GP denotes the guard period and CP the chip periods

Chip number (CN)	Length of field in chips	Length of field in symbols	Contents of field
0-1103	1104	cf table 1	Data symbols
1104-1359	256	-	Midamble
1360-2463	1104	cf table 1	Data symbols
2464-2559	96	-	Guard period

Table 3: The contents of the burst	type 2 fields
------------------------------------	---------------

Data symbols 1104 chips	Midamble 256 chips	Data symbols 1104 chips	GP 96 CP
4	2560*T <sub>c</sub>		<b>&gt;</b>

## Figure 5: Burst structure of the burst type 2. GP denotes the guard period and CP the chip periods

## 5.2.2.1 Burst Type 3

The burst type 3 is used for uplink only. Due to the longer guard period it is suitable for initial access or access to a new cell after handover. It offers the same number of training sequences as burst type 1.

The data fields of the burst type 3 have a length of 976 chips and 880 chips, respectively. The corresponding number of symbols depends on the spreading factor, as indicated in table 1 above. The midamble of burst type 3 has a length of 512 chips. The guard period for the burst type 3 is 192 chip periods long. The burst type 3 is shown in Figure 6. The contents of the burst fields are described in table 4.

### Table 4: The contents of the burst type 3 fields

Chip number (CN)	Length of field in chips	Length of field in symbols	Contents of field
<u>0-975</u>	<u>976</u>	Cf table 1	Data symbols
<u>976-1487</u>	<u>512</u>	<u>_</u>	<u>Midamble</u>
<u>1488-2367</u>	<u>880</u>	Cf table 1	Data symbols
2368-2559	<u>192</u>	<u>_</u>	Guard period

Data symbols 976 chips	Midamble 512 chips	Data symbols 880 chips	GP 192 CP
4	2560*T <sub>c</sub>		<b>&gt;</b>

## Figure 6: Burst structure of the burst type 3. GP denotes the guard period and CP the chip periods

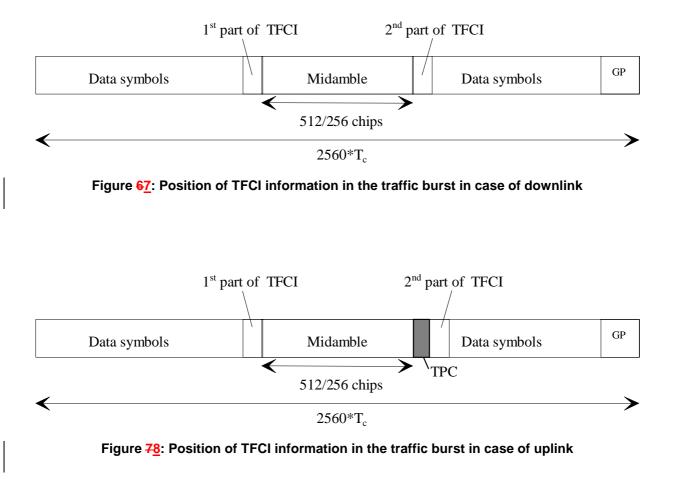
The two different bursts defined here are well suited for the different applications mentioned above. It may be possible to further optimise the burst structure for specific applications, for instance for unlicensed operation.

## 5.2.2.1 Transmission of TFCI

<u>AllBoth</u> burst types 1, and 2 and 3 provide the possibility for transmission of TFCI-both in up and downlink.

The transmission of TFCI is negotiated at call setup and can be re-negotiated during the call. For each CCTrCH it is indicated by higher layer signalling, which TFCI format is applied. Additionally for each allocated timeslot it is signalled individually whether that timeslot carries the TFCI or not. If a time slot contains the TFCI, then it is always transmitted using the first allocated channelisation code in the timeslot, according to the order in the higher layer allocation message.

The transmission of TFCI is done in the data parts of the respective physical channel, this means TFCI and data bits are subject to the same spreading procedure as depicted in [8]. Hence the midamble structure and length is not changed. The TFCI information is to be transmitted directly adjacent to the midamble, possibly after the TPC. Figure 6 shows the position of the TFCI in a traffic burst in downlink. Figure 7 shows the position of the TFCI in a traffic burst in uplink.



Two examples of TFCI transmission in the case of multiple DPCHs used for a connection are given in the Figure 8 and Figure 9 below. Combinations of the two schemes shown are also applicable. It should be noted that the SF can vary for the DPCHs not carrying TFCI information.

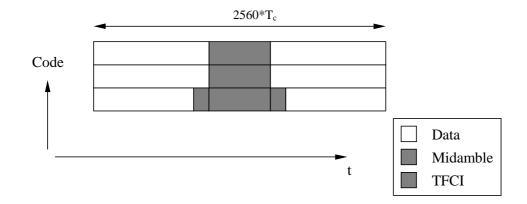


Figure 89: Example of TFCI transmission with physical channels multiplexed in code domain

2560\*Tc Data Midamble TFCI

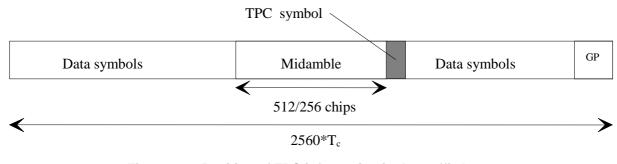
### Figure 109: Example of TFCI transmission with physical channels multiplexed in time domain

### 5.2.2.2 Transmission of TPC

<u>All Both</u>-burst types 1, and 2 and 3 for dedicated channels provide the possibility for transmission of TPC in uplink.

The transmission of TPC is done in the data parts of the traffic burst. Hence the midamble structure and length is not changed. The TPC information is to be transmitted directly after the midamble. Figure 10 shows the position of the TPC in a traffic burst.

For every user the TPC information shall be transmitted at least once per transmitted frame. If TFCI is applied for a CCTrCH, TPC shall be transmitted with the same channelization codes and in the same timeslots as TFCI. If no TFCI is applied for a CCTrCH, TPC shall be transmitted using the first allocated channelisation code and the first allocated timeslot, according to the order in the higher layer allocation message. The TPC is spread with the same spreading factor (SF) and spreading code as the data parts of the respective physical channel.



### Figure 110: Position of TPC information in the traffic burst

## 5.2.2.3 Timeslot formats

## 5.2.2.3.1 Downlink timeslot formats

The downlink timeslot format depends on the spreading factor, midamble length and on the number of the TFCI bits, as depicted in the table 4a.

Slot Format #	Spreading Factor	Midamble length (chips)	N <sub>TFCI</sub> (bits)	Bits/slot	N <sub>Data/Slot</sub> (bits)	N <sub>data/data</sub> field (bits)
0	16	512	0	244	244	122
1	16	512	4	244	240	120
2	16	512	8	244	236	118
3	16	512	16	244	228	114
4	16	512	32	244	212	106
5	16	256	0	276	276	138
6	16	256	4	276	272	136
7	16	256	8	276	268	134
8	16	256	16	276	260	130
9	16	256	32	276	244	122
10	1	512	0	3904	3904	1952
11	1	512	4	3904	3900	1950
12	1	512	8	3904	3896	1948
13	1	512	16	3904	3888	1944
14	1	512	32	3904	3872	1936
15	1	256	0	4416	4416	2208
16	1	256	4	4416	4412	2206
17	1	256	8	4416	4408	2204
18	1	256	16	4416	4400	2200
19	1	256	32	4416	4384	2192

## Table 45a: Time slot formats for the Downlink

## 5.2.2.3.2 Uplink timeslot formats

The uplink timeslot format depends on the spreading factor, midamble length, guard period length and on the number of the TFCI bits. Due to TPC, different amount of bits are mapped to the two data fields. The timeslot formats are depicted in the table 4b.

Slot Format #	Spreadin g Factor	Midambl e length (chips)	<u>Guard</u> Period (chips)	N <sub>TFCI</sub> (bits)	N <sub>TPC</sub> (bits)	Bits/sl ot	N <sub>Data/Slo</sub> t (bits)	N <sub>data/data</sub> <sup>field(1)</sup> (bits)	N <sub>data/data</sub> field(2) (bits)
0	16	512	<u>96</u>	0	0	244	244	122	122
5	16	512	96	0	2	244	242	122	120
6	16	512	96	4	2	244	238	120	118
7	16	512	<u>96</u>	8	2	244	234	118	116
8	16	512	96	16	2	244	226	114	112
9	16	512	96	32	2	244	210	106	104
10	16	256	96	0	0	276	276	138	138
15	16	256	96	0	2	276	274	138	136
16	16	256	96	4	2	276	270	136	134
17	16	256	96	8	2	276	266	134	132
18	16	256	96	16	2	276	258	130	128
19	16	256	<u>96</u>	32	2	276	242	122	120
20	8	512	96	0	0	488	488	244	244
20	8	512	<u>96</u>	0	2	488	486	244	244
26	8	512	<u>96</u>	4	2	488	482	244	242
27	8	512	96	8	2	488	478	240	238
28	8	512	<u>96</u>	16	2	488	470	236	234
29	8	512	<u>96</u>	32	2	488	454	228	226
30	8	256	<u>96</u>	0	0	552	552	276	276
35	8	256	<u>96</u>	0	2	552	550	276	274
36	8	256	<u>96</u>	4	2	552	546	274	272
37	8	256	<u>96</u>	8	2	552	542	272	272
38	8	256	<u>96</u>	16	2	552	534	268	266
39	8	256	<u>96</u>	32	2	552	518	260	258
	8			1	1	и П			1
40	4	512	<u>96</u>	0	0	976	976	488	488
45	4	512	<u>96</u>	0	2	976	974	488	486
46	4	512	<u>96</u>	4	2	976	970	486	484
47	4	512	<u>96</u>	8	2	976	966	484	482
48	4	512	<u>96</u> 96	16 32	2	976	958	480	478
49	-	512			_	976	942	472	470
50 55	4	256 256	<u>96</u>	0	0	1104	1104	552	552
55 56	4	256	<u>96</u>	0	2	1104 1104	1102	552 550	550
56 57	4	256 256	<u>96</u> 96	4	2	1104	1098	550 548	548 546
57 58	4	256 256	<u>96</u> 96	8 16	2	1104	1094 1086	548 544	546 542
59	4	256	<u>96</u> 96	32	2	1104	1080	536	534
				1		NI	1		81
60	2	512	<u>96</u>	0	0	1952	1952	976	976
65	2	512	<u>96</u>	0	2	1952	1950	976	974
66	2	512	<u>96</u>	4	2	1952	1946	974	972
67	2	512	<u>96</u>	8	2	1952	1942	972	970
68	2	512	<u>96</u>	16	2	1952	1934	968	966
69	2	512	<u>96</u>	32	2	1952	1918	960	958
70	2	256	<u>96</u>	0	0	2208	2208	1104	1104
75	2	256	<u>96</u>	0	2	2208	2206	1104	1102
76	2	256	<u>96</u>	4	2	2208	2202	1102	1100
77	2	256	<u>96</u>	8	2	2208	2198	1100	1098
78	2	256	<u>96</u>	16	2	2208	2190	1096	1094
79	2	256	<u>96</u>	32	2	2208	2174	1088	1086

 Table <u>54b</u>: Timeslot formats for the Uplink

### 3G TS 25.221 version 3.3.0 (2000-06)

Slot Format #	Spreadin g Factor	Midambl e length (chips)	Guard Period (chips)	N <sub>TFCI</sub> (bits)	N <sub>TPC</sub> (bits)	Bits/sl ot	N <sub>Data/Slo</sub> t (bits)	N <sub>data/data</sub> <sup>field(1)</sup> (bits)	N <sub>data/data</sub> <sup>field(2)</sup> (bits)
80	1	512	<u>96</u>	0	0	3904	3904	1952	1952
85	1	512	<u>96</u>	0	2	3904	3902	1952	1950
86	1	512	<u>96</u>	4	2	3904	3898	1950	1948
87	1	512	<u>96</u>	8	2	3904	3894	1948	1946
88	1	512	<u>96</u>	16	2	3904	3886	1944	1942
89	1	512	<u>96</u>	32	2	3904	3870	1936	1934
90	1	256	<u>96</u>	0	0	4416	4416	2208	2208
95	1	256	<u>96</u>	0	2	4416	4414	2208	2206
96	1	256	<u>96</u>	4	2	4416	4410	2206	2204
97	1	256	<u>96</u>	8	2	4416	4406	2204	2202
98	1	256	<u>96</u>	16	2	4416	4398	2200	2198
99	1	256	<u>96</u>	32	2	4416	4282	2192	2190
<u>60</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>0</u>	<u>232</u>	<u>232</u>	<u>122</u>	<u>110</u>
<u>61</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>0</u>	2	232	230	122	108
<u>62</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>4</u>	<u>2</u>	<u>232</u>	<u>226</u>	<u>120</u>	<u>106</u>
<u>63</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>8</u>	<u>2</u>	<u>232</u>	<u>222</u>	<u>118</u>	<u>104</u>
<u>64</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>16</u>	<u>2</u>	<u>232</u>	<u>214</u>	<u>114</u>	<u>100</u>
<u>65</u>	<u>16</u>	<u>512</u>	<u>192</u>	<u>32</u>	2	<u>232</u>	<u>198</u>	<u>106</u>	<u>92</u>
<u>66</u>	<u>8</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>0</u>	<u>464</u>	<u>464</u>	<u>244</u>	<u>220</u>
<u>67</u>	<u>8</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>2</u>	<u>464</u>	<u>462</u>	<u>244</u>	<u>218</u>
<u>68</u>	<u>8</u>	<u>512</u>	<u>192</u>	4	<u>2</u>	<u>464</u>	<u>458</u>	<u>242</u>	<u>216</u>
<u>69</u>	<u>8</u>	<u>512</u>	<u>192</u>	<u>8</u>	<u>2</u>	<u>464</u>	<u>454</u>	<u>240</u>	<u>214</u>
<u>70</u>	<u>8</u>	<u>512</u>	<u>192</u>	<u>16</u>	2	<u>464</u>	<u>446</u>	236	<u>210</u>
<u>71</u>	<u>8</u>	<u>512</u>	<u>192</u>	<u>32</u>	<u>2</u>	<u>464</u>	<u>430</u>	<u>228</u>	<u>202</u>
<u>72</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>0</u>	<u>928</u>	<u>928</u>	<u>488</u>	<u>440</u>
<u>73</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>2</u>	<u>928</u>	<u>926</u>	<u>488</u>	<u>438</u>
<u>74</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>4</u>	<u>2</u>	<u>928</u>	<u>922</u>	<u>486</u>	<u>436</u>
<u>75</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>8</u>	<u>2</u>	<u>928</u>	<u>918</u>	<u>484</u>	<u>434</u>
<u>76</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>16</u>	2	<u>928</u>	<u>910</u>	<u>480</u>	<u>430</u>
<u>77</u>	<u>4</u>	<u>512</u>	<u>192</u>	<u>32</u>	2	<u>928</u>	<u>894</u>	<u>472</u>	<u>422</u>
<u>78</u>	<u>2</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>0</u>	<u>1856</u>	<u>1856</u>	<u>976</u>	<u>880</u>
<u>79</u>	<u>2</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>2</u>	<u>1856</u>	<u>1854</u>	<u>976</u>	<u>878</u>
<u>80</u>	<u>2</u>	<u>512</u>	<u>192</u>	<u>4</u>	<u>2</u>	<u>1856</u>	<u>1850</u>	<u>974</u>	<u>876</u>
<u>81</u>	2	<u>512</u>	<u>192</u>	<u>8</u>	2	<u>1856</u>	<u>1846</u>	<u>972</u>	<u>874</u>
<u>82</u>	<u>2</u>	<u>512</u>	<u>192</u>	<u>16</u>	<u>2</u>	<u>1856</u>	<u>1838</u>	<u>968</u>	<u>870</u>
<u>83</u>	<u>2</u>	<u>512</u>	<u>192</u>	<u>32</u>	<u>2</u>	<u>1856</u>	<u>1822</u>	<u>960</u>	<u>862</u>
<u>84</u>	<u>1</u>	<u>512</u>	<u>192</u>	0	<u>0</u>	<u>3712</u>	3712	<u>1952</u>	<u>1760</u>
<u>85</u>	<u>1</u>	<u>512</u>	<u>192</u>	<u>0</u>	<u>2</u>	<u>3712</u>	<u>3710</u>	<u>1952</u>	<u>1758</u>
<u>86</u>	<u>1</u>	<u>512</u>	<u>192</u>	<u>4</u>	<u>2</u>	<u>3712</u>	<u>3706</u>	<u>1950</u>	<u>1756</u>
<u>87</u>	<u>1</u>	<u>512</u>	<u>192</u>	<u>8</u>	<u>2</u>	<u>3712</u>	<u>3702</u>	<u>1948</u>	<u>1754</u>
<u>88</u>	<u>1</u>	<u>512</u>	<u>192</u>	<u>16</u>	<u>2</u>	<u>3712</u>	<u>3694</u>	<u>1944</u>	<u>1750</u>
<u>89</u>	<u>1</u>	<u>512</u>	<u>192</u>	<u>32</u>	<u>2</u>	<u>3712</u>	<u>3678</u>	<u>1936</u>	<u>1742</u>

# 5.2.3 Training sequences for spread bursts

In this subclause, the training sequences for usage as midambles in burst type 1<u>, 2 and 3 and burst type 2</u> (see subclause 5.2.2) are defined. The training sequences, i.e. midambles, of different users active in the same cell and same time slot are cyclically shifted versions of one single basic midamble code. The applicable basic midamble codes are given in

Annex A.1 and A.2. As different basic midamble codes are required for different burst formats, the Annex A.1 shows the basic midamble codes  $\mathbf{m}_{PL}$  for burst type 1 and 3, and Annex and A.2 shows  $\mathbf{m}_{PS}$  for burst type 2. It should be noted that <u>burst type 2 the different burst types</u>-must not be mixed <u>with burst type 1 or 3</u> in the same timeslot of one cell.

The basic midamble codes in Annex A.1 and A.2 are listed in hexadecimal notation. The binary form of the basic midamble code shall be derived according to table 5 below.

4 binary elements $m_i$	Mapped on hexadecimal digit
-1 -1 -1 -1	0
-1 -1 -1 1	1
-1 -1 1 –1	2
-1 -1 1 1	3
-1 1 -1 –1	4
-1 1 -1 1	5
-1 1 1 -1	6
-1 1 1 1	7
1 -1 -1 –1	8
1 -1 -1 1	9
1 -1 1 -1	A
1 -1 1 1	В
1 1 -1 -1	С
1 1 -1 1	D
1 1 1 -1	E
1 1 1 1	F

Table 65: Mapping of 4 binary elements  $m_i$  on a single hexadecimal digit

For each particular basic midamble code, its binary representation can be written as a vector  $\mathbf{m}_{\rm p}$ :

$$\mathbf{m}_{\mathrm{P}} = (m_1, m_2, \dots, m_p) \tag{1}$$

According to Annex A.1, the size of this vector  $\mathbf{m}_{\rm P}$  is P=456 for burst type 1 and 3. Annex A.2 is setting P=192 for burst type 2. As QPSK modulation is used, the training sequences are transformed into a complex form, denoted as the complex vector  $\mathbf{m}_{\rm P}$ :

$$\underline{\mathbf{m}}_{\mathrm{P}} = \left(\underline{m}_{1}, \underline{m}_{2}, \dots, \underline{m}_{P}\right)$$
(2)

The elements  $\underline{m}_i$  of  $\underline{\mathbf{m}}_{\mathbf{P}}$  are derived from elements  $m_i$  of  $\mathbf{m}_{\mathbf{P}}$  using equation (3):

$$\underline{m}_i = (\mathbf{j})^i \cdot m_i \text{ for all } i = 1, \dots, P$$
(3)

Hence, the elements  $m_i$  of the complex basic midamble code are alternating real and imaginary.

To derive the required training sequences, this vector  $\underline{\mathbf{m}}_{P}$  is periodically extended to the size:

$$i_{\max} = L_m + (K'-1)W + \lfloor P/K \rfloor$$
(4)

Notes on equation (4):

- K', W and P taken from Annex A.1 or A.2 according to burst type and thus to length of midamble  $L_m$
- K=2K'
- $\lfloor x \rfloor$  denotes the largest integer smaller or equal to x

So we obtain a new vector  $\mathbf{\underline{m}}$  containing the periodic basic midamble sequence:

$$\underline{\mathbf{m}} = \left(\underline{m}_1, \underline{m}_2, \dots, \underline{m}_{i_{\max}}\right) = \left(\underline{m}_1, \underline{m}_2, \dots, \underline{m}_{L_m + (K'-1)W + \lfloor P/K \rfloor}\right)$$
(5)

The first P elements of this vector  $\underline{\mathbf{m}}$  are the same ones as in vector  $\underline{\mathbf{m}}_{P}$ , the following elements repeat the beginning:

$$\underline{m}_i = \underline{m}_{i-P} \text{ for the subset } i = (P+1), \dots, i_{\max}$$
(6)

Using this periodic basic midamble sequence  $\underline{\mathbf{m}}$  for each user k a midamble  $\underline{\mathbf{m}}^{(k)}$  of length  $L_m$  is derived, which can be written as a user specific vector:

$$\underline{\mathbf{m}}^{(k)} = \left(\underline{m}_{1}^{(k)}, \underline{m}_{2}^{(k)}, \dots, \underline{m}_{L_{m}}^{(k)}\right)$$
(7)

The L<sub>m</sub> midamble elements  $\underline{m}_{i}^{(k)}$  are generated for each midamble of the first K' users (k = 1,...,K') based on:

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K'-k)W} \text{ with } i = 1, \dots, L_{m} \text{ and } k = 1, \dots, K'$$
(8)

The elements of midambles for the second K' users (k = (K'+1),...,K = (K'+1),...,2K') are generated based on a slight modification of this formula introducing intermediate shifts:

$$\underline{m}_{i}^{(k)} = \underline{m}_{i+(K-k)W+\lfloor P/K \rfloor} \text{ with } i = 1, \dots, L_{m} \text{ and } k = K'+1, \dots, K$$
(9)

Whether intermediate shifts are allowed in a cell is broadcast on the BCH.

The midamble sequences derived according to equations (7) to (9) have complex values and are not subject to channelisation or scrambling process, i.e. the elements  $\underline{m}_{i}^{(k)}$  represent complex chips for usage in the pulse shaping process at modulation.

The term 'a midamble code set' or 'a midamble code family' denotes K specific midamble codes  $\underline{\mathbf{m}}^{(k)}$ ; k=1,...,K, based on a single basic midamble code  $\mathbf{m}_{p}$  according to (1).

#### 5.3.3 The physical random access channel (PRACH)

The RACH as described in subclause 4.1.2 is mapped onto one or more uplink physical random access channels (PRACH). In such a way the capacity of RACH can be flexibly scaled depending on the operators need.

This description of the physical properties of the PRACH also applies to bursts carrying other signaling or user traffic if they are scheduled on a time slot which is (partly) allocated to the RACH.

#### 5.3.3.1 PRACH Spreading

The uplink PRACH uses either spreading factor SF=16 or SF=8 as described in subclause 5.2.1.1. The set of admissible spreading codes for use on the PRACH and the associated spreading factors are broadcast on the BCH (within the RACH configuration parameters on the BCH).

#### 5.3.3.2 PRACH Burst Types

The mobile station<u>UE</u>s send the uplink access bursts of type 3 randomly in the PRACH. <u>TFCI and TPC are not applied</u> for the PRACH. The PRACH burst consists of two data symbol fields, a midamble and a guard period. The second data symbol field is shorter than the first symbol data field by 96 chips in order to provide additional guard time at the end of the PRACH time slot.

The precise number of collision groups depends on the spreading codes (i.e. the selected RACH configuration. The access burst is depicted in figure 11, the contents of the access burst fields are listed in table 6 and table 7.

Data symbols 976 chips	Midamble 512 chips	Data symbols 880 chips	GP 192 CP
	2560*T <sub>c</sub>		

←

#### Figure 11: PRACH burst, GP denotes the guard period

#### Table 6: number of symbols per data field in PRACH burst

Spreading factor (Q)	Number of symbols in data field 1	Number of symbols in data field 2
8	<del>122</del>	<del>110</del>
<del>16</del>	<del>61</del>	<del>55</del>

#### Table 7: The contents of the PRACH burst field

Chip number (CN)	Length of field in chips	Length of field in symbols	<b>Contents of field</b>
<del>0-975</del>	<del>976</del>	<del>cf table 1</del>	Data symbols
<del>976-1487</del>	<del>512</del>	-	Midamble
<del>1488-2367</del>	<del>880</del>	<del>cf table 1</del>	Data symbols
<del>2368-2559</del>	<del>192</del>	-	Guard period

#### 5.3.3.3 PRACH Training sequences

The training sequences, i.e. midambles, of different users active in the same time slot are time shifted versions of a single periodic basic code. The basic midamble codes used for PRACH bursts are the same as for burst type <u>31</u> and are shown in Annex A. The necessary time shifts are obtained by choosing either *all* k=1,2,3...,K' (for cells with small radius) or *uneven*  $k=1,3,5,...\leq K'$  (for cells with large radius). Different cells use different periodic basic codes, i.e. different midamble sets.

For cells with large radius additional midambles may be derived from the time-inverted Basic Midamble Sequence. Thus, the second Basic Midamble Code  $m_2$  is the time inverted version of Basic Midamble Code  $m_1$ .

In this way, a joint channel estimation for the channel impulse responses of all active users within one time slot can be performed by a maximum of two cyclic correlations (in cells with small radius, a single cyclic correlator suffices). The different user specific channel impulse response estimates are obtained sequentially in time at the output of the cyclic correlators.

#### 5.3.3.4 <u>PRACH timeslot formats</u>

For the <u>PRACH</u> the timeslot format is only spreading factor dependent. <u>The timeslot formats 60 and 66 of table 5b are</u> <u>applicable for the PRACH</u>. Burst type 1 midamble is always used. The two data fields contain a different number of <u>bits</u>.

Table 4c: Timeslot formats for the RACH

<del>Slot</del> Format #	Spreading Factor	Midamble length (chips)	Bits/slot	N <sub>Data/Slot</sub> (bits)	N <sub>data/data</sub> <sub>field(1)</sub> (bits)	N <sub>data/data</sub> field(2) (bits)
Ð	<del>16</del>	<del>512</del>	<del>232</del>	<del>232</del>	<del>122</del>	<del>110</del>
4	8	<del>512</del>	464	464	<del>2</del> 44	<del>220</del>

#### 5.3.3.5 Association between Training Sequences and Channelisation Codes

For the PRACH there exists a fixed association between the training sequence and the channelisation code. The generic rule to define this association is based on the order of the channelisation codes  $\mathbf{c}_Q^{(k)}$  given by *k* and the order of the midambles  $\mathbf{m}_j^{(k)}$  given by *k*, firstly, and *j*, secondly, with the constraint that the midamble for a spreading factor *Q* is the same as in the upper branch for the spreading factor 2*Q*. The index *j*=1 or 2 indicates whether the original Basic Midamble Sequence (j=1) or the time-inverted Basic Midamble Sequence is used (j=2).

- For the case that all k are allowed and only one periodic basic code  $m_1$  is available for the RACH, the association depicted in figure 12 is straightforward.
- For the case that only odd *k* are allowed the principle of the association is shown in figure 13. This association is applied for one and two basic periodic codes.

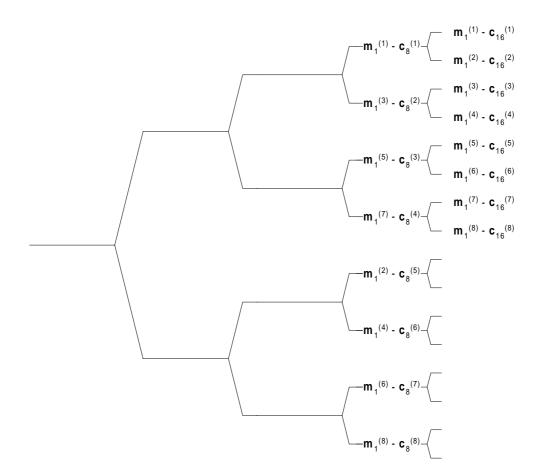


Figure 123: Association of Midambles to Channelisation Codes in the OVSF tree for all k

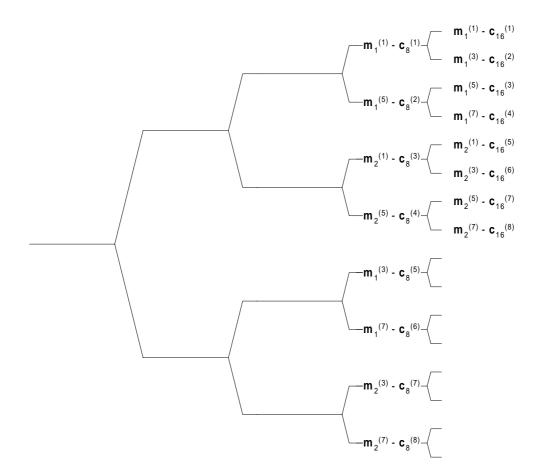


Figure 134: Association of Midambles to Channelisation Codes in the OVSF tree for odd k

### A.1 Basic Midamble Codes for Burst Type 1 and <u>3PRACH Burst Type</u>

In the case of burst type 1 or 3 (see subclause 5.2.2) or in the case of PRACH burst the midamble has a length of Lm=512, which is corresponding to:

30

K'=8; W=57; P=456.

Depending on the possible delay spread cells are configured to use midambles which are generated from the Basic Midamble Codes (see table A-1)

- for all k=1,2,...,K; K=2K' or
- for k=1,2,...,K', only, or
- for odd  $k=1,3,5,\ldots,\leq K'$ , only.

Depending on the cell size midambles for PRACH are generated from the Basic Midamble Codes (see table A-1)

- for k=1,2,...,K' or
- for odd  $k=1,3,5,...,\leq K'$ , only.

The cell configuration is broadcast on BCH.

The mapping of these Basic Midamble Codes to Cell Parameters is shown in TS 25.223.

Code ID	Basic Midamble Codes m <sub>PL</sub> of length <i>P</i> =456
m <sub>PL0</sub>	8DF65B01E4650910A4BF89992E48F43860B07FE55FA0028E454EDCD1F0A09A6F029668F55427
IIIFLU	253FB8A71E5EF2EF360E539C489584413C6DC4
m <sub>PL1</sub>	4C63F9BC3FD7B655D5401653BE75E1018DC26D271AADA1CF13FD348386759506270F2F953E9
TTPL1	3A44468E0A76605EAE8526225903B1201077602
	8522611FFCAEB55A5F07D966036C852E7B15B893B3ABA9672C327380283D168564B8E1200F0E
m <sub>PL2</sub>	
	2205AF1BB23A58679899785CFA2A6C131CFDC4
m <sub>PL3</sub>	F58107E6B777C221999BDE9340E192DC6C31AB8AE85E70AA9BBEB39727435412A5A27C0EF7
	3AB453ED0D28E5B032B94306EC1304736C91E922
m <sub>PL4</sub>	89670985013DFD2223164B68A63BD58C7867E97316742D3ABD6CBDA4FC4E08C0B0CBE44451
	575C72F887507956BD1F27C466681800B4B016EE
m <sub>PL5</sub>	FCDEF63500D6745CDB962594AF171740241E982E9210FC238C4DD85541F08C1A010F7B3161A
	7F4DF19BAD916FD308AB1CED2A32538C184E92C
m <sub>PL6</sub>	DB04CE77A5BA7C0E09B6D3551072B11A7A43B6A355C1D6FDCF725D587874999895748DD098
	32ABC35CEC3008338249612E6FE5005E13B03103
m <sub>PL7</sub>	D2F61A622D0BA9E448CD29587D398EF8CDC3B6582B6CDD50E9E20BF5FE2B3258041E14D608
IIIPL/	21DC6725132C22D787CD5D497780D4241E3B420D
m	7318524E62D806FA149ECC5435058A2B74111524B84727FE9A7923B4A1F0D8FCD89208F34BE
m <sub>PL8</sub>	E5CADEB90130F9954BB30605A98C11045FF173D
m <sub>PL9</sub>	8E832B4FA1A11E0BF318E84F54725C8052E0D099EF0AF54BC342BEE44976C9F38DE701623C7
	BF6474DF90D2E2222A4915C8080E7CD3EC84DAC
m <sub>PL10</sub>	CFA5BAC90780876C417933C43103B55699A8AD51164E590AF9DA6AF0C18804E1F74862F00CE
	7ECC899C85B6ABB0CAD5E50836AD7A39878FE2F
m <sub>PL11</sub>	AD539094A19858A75458F1B98E286A4F7DC3A117083D04724CBE83F34102817C5531329CDB43
	7FFF712241B644BDF0C1FEC8598A63C2F21BD7
m <sub>PL12</sub>	BEB8483139529BDE23E42DA6AB8170DD0BFBB30CE28A4502FAF3C8EDA219B9A6D5B849D9C
	9E4451F74E2408EA046061201E0C1D69CF48F3A94
m <sub>PL13</sub>	C482462CA7846266060D21688BA00B72E1EC84A3D5B7194C8DA39E21A3CE12BF512C8AAB6A
INFEI5	7079F73C0D3E4F40AC555A4BCC453F1DFE3F6C82
m <sub>PL14</sub>	9663373935FD5C213AC58C0670206683D579D2526C05B0A81030DDF61A221D8A68EAD8D6F7A
ITIPL14	A0D662C07C6DCD0115A54D39F03F7122B0675AC
~	
MPL15	387397AE5CD3F2B3912C26B8F87CE82CEFEC55507DB08FB0C4CF2FD6858896201ACA726428
	1D0298440DD3481E5E9DDB24C16F30EB7A22948A
m <sub>PL16</sub>	AFE9266843C892571B6230D808788C63B9065EA3BDFF687B92B8734A8D7099559FEA22C94165
	76D0C087EB4503E87E356471B330182A24A3E6
m <sub>PL17</sub>	6E6C550A4CB74010F6C3E0328651DF421C456D9A5E8AE9D3946C10189D72B579184552EE3E7
	99970969C870FE8A37B6C4BA890992103486DC0
m <sub>PL18</sub>	D803CA71B6F99CFB3105D40F4695D61EB0B62E803F79302EE3D2A6BF12EA70D304B181E8B3
	8B3B74F5022B67EB8109808C62532688C563D4BE
m <sub>PL19</sub>	E599ED48D01772055DBE9D343A4EA5EABE643DA38F06904FC7523B08C4101F021B199AF759A
	00D9AC298881D79413A77470992A75C771492D0
m <sub>PL20</sub>	9F30AC4162CE5D185953705F3D45F026F38E9B5721AEFE07370214D526A2C4B344B508B57BF
	B2492320C05903C79CBEE08C6E7F218B57E14D6
m <sub>PL21</sub>	B5971060DA84685B4D042ED0189FAF13C961B2EF61CC164E363B22AAB14AC8AF607906C1C6
	E04F2054C687AA6741A9E70639857DA02B6FFFFA
m <sub>PL22</sub>	97135FC2226C4B4A5CBA5FCA3732763B87455F73A1148006F3DF214BD4C936D061E04045160
ITIPL22	E2CE33B9CD09D08FDE2A37F4E998322B4401D27
m <sub>PL23</sub>	4D256D57C861B9791151A78D5299C56D116B6178B2A2D04BB95FB76540AF28341DC6EC4E7E
	D3BF9E508478D9C8F44914805DA82429E1CF320E
m <sub>PL24</sub>	858EF5C84CE32D18D9ABA110EEA7474CF0CD70254D2928C3F4DFF6BB3A518587CADA190290
	78AC90A8336C8178203BE3289E601F07D089CB64
m <sub>PL25</sub>	920A8796A511650AEF32F93DD3C39C624E07AE03CE8C96139973F54DCB9803C5164ADB502D
	4FF561564D607037FCD172921F1982B102C3312C
m <sub>PL26</sub>	485C5DAE76B360A9C56E20B8422EA3E6ACF07CB093B5587CB0E6A5498A4714081EA98DBCD
-	B0482B26E0D097C03444473D233BEF3C8E440DEBF
m <sub>PL27</sub>	565A9D54EA789892B024F97E728E8EE112411942C48BD0C5BC8AA457D8DC9941F0F7424B386
-1 -21	43FFE6521CD306FBC56FE10F1428D4C245B5606
mplaa	5AEF2C0C2C378179A1AC36242E6B3EDB72C42D3624437674F8D51260C0898C201837CBA14E9
m <sub>PL28</sub>	
~	E23D1EF6451C4ACF27AB031F457A8A1BFD148AE
MPL29	87D8FE685417822A23D925307E6C11081ADAC4702BCCD9BE448E78984D109B50DEF5B7C58B
	C71EA1F0A6826BA8AD1978843E7697F3E416AADA

# Table A-1: Basic Midamble Codes $\,m_{\rm p}\,$ according to equation (5) from subclause 5.2.3 for case of burst type 1 and 3

94402872AF27E50E72401FB629E7E275DB0D090E1292652798350C1D0C9D4B9D8E2BF7112           82E8E1010034E9282E07244075F19926F8847A2           mb1a1         8CCB5128238BC0098E30972D62792AEF02B98BDDCAD68C9916C00BF91CBE788DF03851F           AF8805534E73736C259D270811013CB14226F658         827646FAC2BF1379C56854AA2D385A4BF22F946511011A6589131C3640707D40E67ED804AF           mr_33         603555054E74754393061967E8285C27E342         9365504E747CD788A34E207TEA28D8444FA533300F41499E260D2E65C256A52E1DD5861F           mr_34         56309479FCA0304409E54A802299162657AAC734761C6E90DA8BCE4F61A763E0B48D3F           mr_34         56309479FCA0304409E54A802299162657AAC734761C6E90DA8BCE4F61A763E0B48D3F           mr_34         56309479FCA0304409E54A802299162657AAC734761C6E90DA8BCE4F61A763E0B48D3F           mr_35         F87466C2828ABA4828DA006E0F9040FD140421DC           mr_35         F892409BCA8AAC1FCDF0500438C643704BE86305887C0F64F04C4E0007DCA9E508EED           C102128E319ACBCC94F1729272F720397029FE         77167664E0447420007DCA9E508BE0E           mc_34         F8958589D200537367020CD43631F1922708374E4E9234F1332A23CD991256E4BAED940F7B336E           mc_34         F60305679357022CD340361F29024734746E82934F132A232CD991256E4BAED940F7B336E           mc_34         F60305679357022CD34351F1492246B32816F290           mr_35         F895050557357022CD34351F1282726B328164E9234F1332A23CD991256E428622F8299141F50666           mr_36         F1630468646E124945648232816376493476412604280278F2991491750666 </th <th>Code ID</th> <th>Basic Midamble Codes m<sub>PL</sub> of length <i>P</i>=456</th>	Code ID	Basic Midamble Codes m <sub>PL</sub> of length <i>P</i> =456
82EBB161003AE9829E07244077819926F8847A2           Rest:1         8CC581282388C0808E309720E97284FD2898BDDCAD68C9916C005F91CBE788B0F03851F           AF88605534P073450C2590270B1013CB14226F658         736AD213CAF5935741900061967E8285C27E34C           Rest:3         46956574197C3057056854A20270E742805444FA533300F11499E260D2665C256A52E1DD5861F           27C98E00687D107233F51A1167B0F72FB184654         776AD213CAF5935741900061967E8285C27E34C           Rest:3         56305479FCAD30340405E5A90299162657AAC734761C5E900A8BCE4F61A763E0B848D3F           BS7F7468C282ABA4828DAD06E0F904CFD404210C         77784502872664A74AC126F050050F0A38C684180683088F2306B48C68ECF17F76CB285991F           Rest:3         AF7E57A690727826404544724ADC0F0050F0A3080BA6531614973D26905FDF41E3F779FF06           EBAF1540928311BCF4C2509064AF34AC318666         F800D560F337032ECD44F34AC318666           Rest:5         F800D560F337032ECD44F34AC3186565           Rest:5         F800D560F337032ECD44F34AC3186505           Rest:5         F800D560F37032F124528452816F1420F718E840C1450C9105428C2F8F299141F55066           Rest:5         F800D56047F801F204F182924652815474120F718E840C1450C9105428C2F8F299141F55066           Rest:5         T60880FF9000C9H44E1E240F9852056151A1C5C2           Rest:5         ACE5D061506047F8017937317361274D5850A3934E5CC1598C3939E5674908CA66653702FE27BCCA2A4           150680F97000C9H44E1E240948E2336C8850A36425CC125A01670605769244E262042970339E5                201683340A0898528050052476025980429		84802B72AF27B5BE724D1FB629E0E627BDB0D9061292562F98350C1D0C9D4B9D8E2BF71123C
AF8860534PD73436C258027081013C514226F658           mr12         CPC4EFAC2EP1597CE6854A3207249102333458F2946511011.66598131C3640707D40E67ED804AF           736AD213CAF5935741900061967E8285C27E34C         mr13           6305E584EEAFC7E68A34B207E28239162857AAC734761C6E90DA8BCE4F61A763E0B848D3F           56305E9AF2FAFC7E68A34B207E28299162857AAC734761C6E90DA8BCE4F61A76350B848D3F           56305E9A759FCAD30340409E5A802299162867AAC734761C6E90DA8BCE4F61A763E0B848D3F           56305E9A759FCAD30340409E5A802299162867AAC734761C6E90DA8BCE4F61A763E0B848D3F           5784662828ABA4820DA00560F30A05E05441702628038088F2506B48C68ECF17F76CB285991F           AFCF2A5697218FCD03405442730C2451478202925098387C0F64F04C4E0007DCA9E50BEEE           C10228E319AC6E4F1722072727275717470397029FE           mrLas         AFCF2A56977286CD3405442730C2451898657           F890D550F33F032ECDA3A51FED427D34F64E829AF1332A23CD961258E4BAED040E78336           RFLas         F890D550F33F032ECDA3A51FED4270534F64E829AF1332A23CD961258E4BAED040E78336           mrLas         AC55DD61506047E00F3D741B3992DF4D7F18E946CC145C0E9105428C2F8F299141F5D666           150680FF900C59446F1E74D548E2238C085064934E5C0C1980E23980E53102422C67262422025939E51CB00A2226872381950           mrLas         S163798E7026583303D51210A645895C0E51141701807C61F25C4D42C063682E889D00           mrLas         S163798E702693303D51210A6458052764034256C0E982393E5150062827822702424542381950           mrLas         S16379847D2030303D51210A64523025709689846 <tr< td=""><td></td><td></td></tr<>		
E2F4E6FAC2BF1970CE6854A2D33534BF82P46511011A6589131C3640707D40E67ED804AF           736AD213CAF593741900061905782885C27E42           MPI_33         4095E584E2AFCDF88A34B267EFA28D844FA533900741499E260D2E66C256A52E1DD6861F           27C98E00687D107233F51A1167BC772F8184654         777463C6E90DA8BCE4F61A763E0B48D3F           MPI_34         5301E9A79FCA0030304D9E5A80229162677AC734761C6E90DA8BCE4F61A763E0B48D3F           MPI_35         5301E9A79FCA0030304D9E5A80229162677AC734761C6E90DA8BCE4F61A763E0B48D3F           MPI_36         FC72E3007238AA42320AD00504P9040F2140E           MPI_36         FC72E30377286C0A936E947304C5514F68209EC298B387C0F64F04C4E0007DCA9E50BEEC           MPI_37         FF34962028041BC7420724574E48E29AF1332A23CD961256E4BAED040E7B336E           MPI_39         FF295E5899D20828C1334CF1292726374E4E293AF1332A23CD91256E4BAED040E7B336E           MPI_39         FF295E6589D2002ECD34351FE19D27D347BEE4829AF1332A23CD91256E4BAED040E7B336E           MPI_30         ACC5D0615060747067B7D141038902DF4D7F18EB446C145C0E9105428C2F8F299141F5D666           MPI_40         150369F9900294AD71432C04598223818F29D           MPI_40         514579EED063002532010A0753173012F405BA1671807C61F25C4D42C063682E89DD0           MPI_40         F5045022051A1282246B32818F29D           MPI_40         CDC644FE400C6897604F9D14D714123BF16FFF0E49735F674908CA60633702FE27BCCA244           454595490032C4C43FE4804293213173012F405BA170718005C61F2520C4D42063682E89DD0	m <sub>PL31</sub>	8CCB5128238BCB088E30972D62792AEF02B9BBDDCAD68C9916C00BF91CBE788B0F03851FA
736AD213CAF6933741900061967E8286227E34C           736AD213CAF69337419002768334827E84280844474353900F14199E260D2E65C256A52E1DD5661F           7700000000000000000000000000000000000		
4095E5B4EEAFCDF68A348267EEA28D8444FA53300741499E280D2E65C256A52E1DD5861F           27C9860087D107233F51A1167BC72F81844654           PB134         5630E9A79FCAD30340409E5A80229162657AAC73470106E90DA8BCE4F61A763E0B84B03F           B37748602838A8428DA0D66P904CFD40421DC           Pm134         CD12824C0BCA8AAC1FCBF050A3BC684A180E863D888F2506B48C68ECF17F76CB285991F           A18EB6397211FA0002405417282C0748D57288C03405E298B387C0F64F04C4E0007DCA9E50BEED           C102128E319ACBCC64F1729272F7720397029FE           Pm137         RF88EE5889D20827CA440CCDF0050F03A0B80D86531614973D26905FDF41E37779FF06           Pm138         RCFC2509C64AF34AC31B8965           Pm139         RF88EE5889D2025CD3A351FED427D634F64E928AF1332A23CD961258E4BAED040E7B336E           Re148         R99055073570522CD3A351FED427D634F64E928AF1332A23CD961258E4BAED040E7B336E           Pm149         150680F5900794F200F370141935902F107F18E1846CC145CCE9105428C2F8F299141F5066E           Pm140         150680F59007946F1240054822381687E90           Pm240         150680F59007946F12400548223808304E502           Pm240         150680F590079417011457083717617461671807C61F25C4D42C063682E89D00           F7304460404E83F75550FEB228DC52700AE939FC46935F674908CA60653702FE27BCCA2A4           94543556590702402747593340C17384708E7515046B220A           9704440404E83775550FEB228DC52700AE939E764355674908CA60653702FE27BCCA2A4           97044504683756407092040C14714714328F16FF7064675359892FC48549496347531F62406C728	m <sub>PL32</sub>	
27C98E00687D107233F5141167BCF72F8184654           PB:34         6830030400965A002299162657AACC73476166E90DA8BCE4F61A763E0B848D36           B3F78468C328ABA4828DA06E0F904CFD40421DC         CD12824C008CA8AAE1FCBBC06844130C583D888F2506B48C68ECF17F76CB285991F           A18EE6337211FAD002F482D57A286CD430E3F11A6         AFCF7A560877286CD340544730C35417082D9EC98B387C0F64F04C4E0007DCA9E50BEEC           C102126E319AC6C4F1729272F2F72C3937029FE         IBF89EE8589D20882A72A44DCCDF0005P0A3D88DBA6531614973D26905FDF41E3F779F06- E8AF15409285116854EF7A1E0A4F31AC31B8965           PR:35         F890D550F33F032ECDA3A51FED427D634F64E82AF1332A23CD961256E4BAED040E7B3365 8E2506C272A1281698EFFA1E0AE401185F08C10           PR:36         F890D550F33F032ECDA3A51FED427D634F64E82301F896C10           PR:30         ACE5D061560047E00FB7D14B03992D4D7F18EB46C145C0E9105428C278F299141F5D666 1904A7DC2513A3B83994ACB1292246B32818FE9D           Pm:40         150680FF900C9846E1E24D548E2238CB850A934E5CCDE9BC3939EB51CB0AE202B7D339EE 2018B33A0A39963D03D23D10A0753173612F47D658A15710807C61F25C4D42C063682E8E9DD0 F79D446A046E33756C0FB228DC52706E694B6           Pm:40         T50680F790026846E1E24D548E2238CB850A934E5CCDE9BC3939EB51CB0A53702FE27BCCA2A4 98453AF8861055C8C549EB6A951A8398AD4B94D           Pm:42         CD644FE40C0689704F5140714123B116F902476325674908CA60653702FE27BCCA2A5 47026A7E79838A233A8C1C77B66CB591582DA5           Pm:43         D3681E8579800028CC428FE184025342200A5F9076B92FC4E85495664753DB0891A0 7FD849B87FCA993838522F8069898228A22D220AAD5F9076B93FC4E854949664753DB0891A0 7FD849B87FCA993838522F80598382272E2020AAD5F9076B93CF48454549664753DB0891A04		
	m <sub>PL33</sub>	
B3F78468C28ABA482BDAD06E0F904CFD40421DC           mPL35         CD1284C0BCA8AAC1FC6F050038C684A180E863D88F2506B48C68ECF17F76CB285991F A18EB6397211FAD002F482D57A258CD45DE3FF1A8           mPL36         AFCF2A50877286CD5004342730C453147052092FE           mPL37         18F83EE8589D20882A72X44DCCD0500F0A3D88DBA6531614973D26905FDF41E3F779F66           E8AF154092851180F24C2509C64AF34AC318985           mPL38         F880D550F33F032ECDA3A51FE0427D634F64E829AF1332A23CD961258E4BAED040E7B3366 8E250EC272A1218089EBF7A1E0A240185961           MPL38         ACE5DD61506047E80FB7D41BD3992DF4D7F18EB48CC145C0E9105428C2F8F299141F5D666 1904A7DC2513A889994ACB129224883281F59D           mPL40         150680FF900C9846E1E24D54BE2233C8950A948E5CDE9BC3393EB51CB0AE202B7D339EE 2018B33A0AB9B63DA5D512D64FB38C0E51A1C82C2           mPL40         150680FF900C9846E1E24D54BE2232C82520E54B46           mPL40         150680FF900C9846E1E24D54BE223C052708E69486           mPL42         CDC44FE4C0C6887604F9D14D714123BF16FF01497161807C61F25C4D42C063682E8E9DD0           F79D4486A046B3775E00FB22ADC4239764B140D6002F60508239BC6A3255A15FE06C782C4C254           47026A7E79838A2933A81C77B86DF591582AD3           mPL43         57047023DA811806A54C231281F03317830E7B305D3CAA7D6382A5233104CFD541           2D797345325047023DA811806A54C231281F03317830E7B305D3CAA7D6382A5233104CFD541		
CD12B24C0BCA8AAC1FCBF0500A3BC684A190E83D88F2506B48C68ECF17F76CB285991F           MPL35         AFCF2A50677286CD3405442730C45514F082D9EC296B367C0F64F04C4E0007DCA9E50BEED           CD12126E1314ACBC6447730C45514F082D9EC296B367C0F64F04C4E0007DCA9E50BEED         C102126E319ACBC64471729272F2720397029FE           MPL36         AFCF2A50877286CD3405442730A4C31B8965         F1332A23CD961258E4BAAD040E7B3366           MPL36         AFSE508D20882772A40CCFD0505704303B8DBA6531614973D26905FDF41E3F779FF06-           E8AF15409228511BC74022D9064AF34AC31B8965         F1332A23CD961258E4BAAD040E7B3366           MPL36         AE5D0E15050475022ECDA3A51E7D427B34746E4E29AF1332A23CD961258E4BAAD040E7B3366           MPL36         AE5D0E150504750272A12816B9EBFFA1E0A2F0347F18EE46CC145C0E9105428C2F8F299141F5D666           1904A7DC2513A3B83994ACB1222246B32818FE9D         F1054600294567520C298D2309E51CB0A25202B7D339EE5           MPL40         51A579EED2683A002D32D10A0753173612F405BA187D1807C61F25C4D42C06382E8E9DD0           F79D4460467B37550FE282D052506E69486         MPL44           P8433AF8601055C5459EB36518320A50AB94D         MPL43           760A10386C565373C5001CA3E4239764B140906002F60528239BC6A3255A15FE06C782C4C264           47026A7E79838A2333A61C77B862B5185182DA5           MPL4         27406660784409082C4C46FE1804C34252C00A3A60           F7406660784409082C4C46FE1804C2342S220AADF96076B32FC4E8549064753D80891A02           F740949B87CA3983835A35B838542C0223A8C606F520C2945F373470BE7ED5BCCF7C14	m <sub>PL34</sub>	
A18EB6397211FAD002F482D57A258CD45DE3FF1A6           met_36         AFCF2A50877286CD34054472300245514708209EC296B367C0F64F0C4E0007DCA9E50BEED           C102126E319ACBC64F1729272F2F72C3397029FE         C102126E319ACBC64F1729272F2F72C3397029FE           met_37         18F89EE8580702882772444DCCD00060A3188965           met_38         F890D550737032ECDA3A51FED427D634F64E829AF1332A23CD961258E4BAED040E7B3366           8E250E2727A121809EBFFA1E0A2401185708C10         A047DC25130488394AAB120224883281FE9D           met_40         150680FF300C9846E1E24D54BE2238CB950A934E5CCDE9BC339EB51CB0AE202B7D339EE           150680FF300C9846E1E24D54BE2238CB950A934E5CCDE9BC339EB51CB0AE202B7D339EE           met_40         150680FF300C9846E1E24D54BE2238CB950A934E5CCDE9BC3339EB51CB0AE202B7D339EE           met_41         51679ED26638002D32D10A0753173612F405BA167D1807C61F25C4D42C063862E8E9DD0           F73D446A046E3775E50FEB228DC52F08E69486         met_42           met_44         B7490680778E409082C4C48F18D4C3542C20AADF96076892FC4E85490664753DB0891A0E           750A10366C595373C5001CA3E4239764B14090802CF6052B39BC6A3255A15FE06C782C4C554           47028A7F79838A2933A61C778E646282C0030AADF96076892FC4E85490664753DB0891A0E           750A3086B778E409082C4C48F18D4C3542C20A3ABF6067520029456A32574706875233104CFD54           20797943535E393909040C1778FE4A4C22922           met_46         R23060026E67868349092AC2ED2C4338E600675202294557374708E7ED58CC7274                   076230E0267FEC309F2822004233864DE	m=	
IAFCF2A50877286CD3405442730C45514F082D9EC296B367C0F64F04C4E0007DCA9E50BEED           C102126E319AC0264F129272F2720397E           IBF89EE8589D20882A72A44DCCDF0050F0A3D88DBA6531614973D269055DF41E3F779F06- E8AF1540928511BC/422D0504F3A4C31B8965           IBF89EE55D0E150F0A702E025D04A351FED427D034F64E829AF1332A23CD961258E4BAED040E7B3365           IBF89EE55D0E150F0A702FE80FFD41BD3992DF4D718EB46CC145C0E9105428C2F8F299141F5D666           1904A7DC2513A3B83994ACB1292246832818FE9D           IPF8.40         I5060FF900C9486F1E24D54BE2336CB50A934E5CC1E9BC3398EB1CB0AE202B7D39EE           2018B33A0AB9B63DA5D512D64FB858C0E51A1C82C2           IPF8.40         CDC644FE202C8897604F9D14D714123BF16FF0E49F335F674908CA60653702FE27BCCA2A4           94453AF8661055CC549EB6A551A336AD4894D           IPF8.40         F7504FB3257C46851A336AD4894D           IPF8.41         F7504FB32872FB60E513836AD4894D           IPF8.42         CDC644FE40C6887604F9D14D714123BF16FF0E49F33F674908CA60653702FE27BCCA2A4           94453AF8661055C5C459EB6A551A336AD40B49D         IPF8.42           IPF8.44         F7490686D78EA09882C424BF18DAC542322C0D35AA6           IPF8.44         B7490686D78EA09827C4282F373470BE7E50BCCF7C14           94658260C7264F17933B843A2AD2527609258267C15B2587A           IPF8.48         B26658960C026E678834804202527034BC60765220294557373470BE7E505BCCF7C14           9468B7CCA98F1335A2426709274A442C238E20           IPF8.48         B2665867020727437185	TTPL35	
C102126E319ACBC64F1729272F272C397029FE           mPi,37         18F89E58580020882A72A4ADCCDF0600F0A3D8BDA6531614973D26905FDF41E3F779F066           E8AF1540928511BCF4C25D9C64AF34AC31B8965         8825007375032ECDA3A51FED427D634F64EB29AF1332A23CD961258E4BAED040E7B3366           8E250C2727A12816B9EBF7A1E0AF401185F08C10         ACESDD61506047E807B7D41BD3992DF4D7F18E846CC145C0E9105428C2F8F299141F5D666           1904A7DC25133A883994AC81292246B32818FE9D         150680FF900C9846E1E24D64BE238CB850A34E5CCDE9BC3939EB51CB0AE20287D339EE           2018B33A0A89B63DA5D512064FE580C051A1C82C2         mPi,40         150680FF900C9846E1E24Dc4FE580CE51A1C82C2           mPi,41         51A579EED2663A002D32D10A0753173612F4D58A167D1807C61F25C4D42C083682E8E9DD0         F73D446A046E3775E50FEB228DC52r04E69486           mPi,42         CDC44FE4C0C6887064F9D14D7141238F16FFF0E39735F674908CA60653702FE27BCCA2A4           98453AF866105C8C549EB6A51A3396AD4B94D         mPi,43         F74010366C598737C5001CA184239768H1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E78938A2933A61C77B86C8F591682DA5         mPi,43         B749068078E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849B8FCCA9E119F1623A54272F8C662852C0D33AA6         mPi,44         B7490686D78E4093834126F66285916720AADF96076B92FC4E85490664753DB0891A0E           7FD849B8FCCA9E11F1658A54264221281F83374306E78D57085D3CAA770582A5233104CFD541         2DF9745355E830D79040C71875E442CC229E2           mPi,45         2826659600022EC6778683FAA          0265533653	mpl 26	
IBF99EE8690D2082A72A40DCCDF0050F0A3D88DBA6531614973D26905FDF41E3F779F06           E8AF1540928511BCF4C25D9C64AF34AC31B8965           mPL38         F890D550F33F032ECDA3A51FED427D584F64EB29AF1332A23CD961258E4BAED040E7B3366           BE250EC272A12816B9EBF7A1E0AE401185F08C10         mPL39           MCE5DD61506047E80F87D41BD3992DF4D7F18EB446CC145C0E9105428C2F8F299141F5D666           1904A7DC2513A3B83994ACB1292246B32818FE9D           mPL40         15060F900C984E1E22D64BE2230C5200560A94E5CCDE9BC3939EB51CB0AE202B7D339EE           2018B33A0AB9B63DA5D512D64FB580C651A1C82C2           2018B33A0AB9B63DA5D512D64FB582230C52P08E69486           mPL40         51650F900C9846E1E24DC82280C52P08E69486           mPL43         750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E78933A2833A91C77B66CBF5915B2DA5         7750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           4704068D7B400982C4C4BF18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E         7FD849BB7CA9982B38F2F8C662852C0D35AA6           mPL43         750A10366C59630920AC2H51545150317830E7BD305D3CAA7D6382A5233104CFD54           2059F34536E58300D9040CF1375FEA40CE29E2         mPL46           82655960C26E7686834A0992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A               0986BBCC284F11F165834A20525A1C1BF28516C04239240EAF1EFC05B9874B51F8               861b575840705948945DE0181EE474A90894473408871880E63EF0596B9FCFEC3C06	THE LOO	
E8AF1540928511BCFAC25D9C64AF34AC31B8965           mPL38         F890D550F33F032CD32CD3A351FED427D634F64E29AF1332A23C0961258E4BAED040E7B3368           BE250EC272A12816B9EDFA1E0AE401185F08C10           mPL30         ACE5DD61506047E807B7D41BD3992DF4D7F18E846CC145C0E9105428C2F8F299141F5D666           1904A7DC25133A883994AC81292246B32818FE9D           mPL40         150680FF900C9846E1E24D64BE238CB850A934E5CCDE9BC3939EB51CB0AE20287D339EE           2018B33A0A9B963DA5D512D64F5860C951A1C82C2           mPL41         51A579EED2663A002D32D10A0753173612F4D58A167D1807C61F25C4D42C063682E8E9DD0           F79D446A046EB3775E50FEB228DC52r08E69486           mPL42         CDC44FE4C0C6897604F9D14D714123B116FFF0E49F35F674908CA60653502FE27BCCA2A4           98453AF8661055C8C549EB6A951A8396AD4B94D           mPL43         B7490686D78E409082C4C49FE18D4C35429C20AADF6076B92FC4E85490664753D80891A0E           7F0A4490897CA9992B336F2F8662882C0353A6           mPL45         D86E1857847D23DA811806A54C321281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9745355E58390D9040CF1375FEA44CEC29E2           mPL46         D86E1857847D23DA811806A542231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF34535E58390D9040CF1375FE2A44CEC29E2           mPL46         D86E18578A7D230A8483928A2AD2E25A1C18F28516C04239240EAF1EFC0B98974B518           86198A1E9F53052CFFEC309671A9718825101B           mPL46         E28655980775698482A2AD2E25A1C18F28516C04239240EAF1	m <sub>PL37</sub>	18F89EE8589D20882A72A44DCCDF0050F0A3D88DBA6531614973D26905FDF41E3F779FF0648
BE250EC272A12816B9EBFFA1E0AE401185508C10           mPL30         ACE5DD61506047E80F87D41BD3992DF4D7F18EB46CC145C0E9105428C2F8F299141F5D666           1904A7DC2513A3B83994ACB1292246B32818FE9D           mPL40         150680FF900C9846E1E24D54BE2233CE8950A934E5CCD89R53939EB51CB0AE20287D339EE           2018B33A0AB9863DA5D512064FB58C0E5141C32C2           mPL41         51A579EED2663A002D32D10A0753173612F405BA167D1807C61F25C4D42C063682E8E9DD0           F79D446A046EB3F75E50FEB228DC52F08E694B6           mPL42         CDC644FE4C0C6897604F9D14D714123BF16FFF0E49F35F674908CA60653702FE27BCCA2A4           9453AF8661055C8C549EB6A951A8396AD4894D           mPL43         F740086D75E409082C4C48FE1B04C3422020AADF96076B92FC4E85490664753DB0891A0E           rTD8498B7CA99E38842283A61C77B86CB5520C203AA6           mPL44         B749068077E409082C4C48FE1B04C342231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2D96E1B575847D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2D97943535E5838930P940c0F1375FE4A4CEC29E2           mPL46         828655960C026EC67B683480992AC2E32C1243ABC606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCCC84F11F1658AA58FAA0A00C5F085BFA           mPL47         P6230E02C633853AA899B288AA2ADE25A1C1BF22516C04239240EAF1EFC0B98974B51F8           86108A129F5062CFFEC309F071A971B325101B           mPL48         8286549809085AFB22P00992928C120AC479F814CCE749079D40688F28101037762F125C           76020502C8534830078		
MPL39         ACE5DD61506047E007B7D41BD392DF4D7F18EB46CC145C0E9105428C2F8F299141F5D666           mPL40         T05080FF900C9846E1E24D54BE2238CB950A934E5CCDE9BC3939EB51CB0AE20287D339E           2018B33A0AB963DA5D512D64FB58C0E51A1C82C2         S1A579EED2663A0023221010A0753173612F405B41671807C61F25C4D42C063682E8E9DD0           mPL41         S1A579EED2663A0023221010A0753173612F405B41671807C61F25C4D42C063682E8E9DD0           mPL42         CDC644FE4C0C6897604F9D14D714123BF16FFF0E49F35F674908CA60653702FE27BCCA2A4           98453AF861055C62549E6A951A389A0AB94D           mPL43         750A10366C595373C5001CA3E4239764B14090602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A2933A61C77B86CBF591582DA5           mPL44         B7490686D78E409082C4C48FE18D4C35428C20AADF96076B92FC4E85490664753DB0891A0E           7FD849B87CA99E383F22F8C662852C0D23AA6           mPL45         B246559600026EC67B683480992AC2ED2C43A8E606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCCC84F11F1658A568FAA0A0605F7085BFA           mPL48         EA207662665B8A07D69644964DED818EE474A90894473408871880E63EF0596B9FCFEC3006           8618575B411F16583A422F8186354FD0CB9482           mPL48         EA207662665B8A07D69644964DD1818EE474A90894473408871880E63EF0596B9FCFEC3C06           76DA962FA1FCE02F6E452F8185354FD0CB9482           76DA962FA1FCE02F76E452F8185354FD0CD9482           76DA962FA1FCE05766452F81653542C398B8A           mPL48          EA207662938910F0E533	m <sub>PL38</sub>	F890D550F33F032ECDA3A51FED427D634F64EB29AF1332A23CD961258E4BAED040E7B33691
1904A7DC2513A3883994ACE1292246832818F59D           mPL40         150680FF900C9846E12240548E2238CB950A934E5CDE98C3939EB51CB0AE20287D339EE           2018B33A0AB9B63DA5D512064FB58C0E51A1C82C2           mPL41         51A579EED2663A002D32D10A0753173612F4D5BA167D1807C61F25C4D42C063682E8E9DD0           F79D446A04EB377555DFE82280C52708E594B6           mPL42         CDC644FE4C0C6897604F9D14D714123BF16FFF0E49F35F674908CA60653702FE27BCCA2A4           98453AF8661055C8C549E664931A8396AD4B94D           mPL43         750A10366C595373C5001CA3E4239764814090502CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A2933A61C77B80CB7591582DA5           mPL44         B7490680778E409082C4C4AFEF180AC3429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849B8FFCA99E3B38F22F8C662852C0D35AA6           mPL45         D86E18575847D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54!           2DF9734353E5839009040CF1375FEA44CEC29E2           mPL46         288655960026E66788634A0992AC2ED2C43A8C606F5220C2945F373470BE7ED58CCF7C1A           0986BBCCC84F11F1658AA568FAA0A60C5F085BFA           076230E02C8533653AAB99828AA2A2DE25A1C1BF28516C04239240EAF1EFC0988974B51F8           86108A1E9F50E2CFFEC309F071A976B14CCE749059447340871880E63EF059689FCFEC3C00           780439549909835FAB22F0099298C120AC5A79F814CCE749079D40688F28101037762F125C           7700454394909835FAB22F0099298C120A4C549589147308871880E63EF0596894731097762F125C           77004542983091F0E533422A39775198		8E250EC272A12816B9EBFFA1E0AE401185F08C10
mp <sub>L40</sub> 150680FF900C9B461E124D54BE2238CB950A934E5CCDE9BC3939EB51CB0AE202B7D339EE           2018B33A0AB9B63DA5D512D64FB86C0E51A1C82C2         2018B33A0AB9B63DA5D512D64FB86C0E51A1C82C2           mp <sub>L41</sub> 15A579EED2663A002D322D10A07531731274D5BA167D1807C61F25C4D42C063682E8E9DD0           Fr3D446A046EB3r75E50FEB228DC52F08E694B6         394533AF861055C8C549EB6A951A8396AD4B94D           mp <sub>L42</sub> CDC644FE4C0C6897604F9D14D714123BF16FF0E49F35F674908CA60653702FE27BCCA2A4           98453AF861055C8C549EB6A951A8396AD4B94D         394533F861055C8C549EB6A951A8396AD4B94D           mp <sub>L44</sub> 750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E78983A2933A61C77B862E7591582DA5           mp <sub>L44</sub> B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849B87FCA99E3838F22F8C628252C0D35A6           mp <sub>L45</sub> B6618575B47D23DA811806654C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9F34535E5B390D9040CF1375FEA44CEC292E           mp <sub>L46</sub> 82655960026EC67B863460992AC2ED2C343BC606F5220C2945F373470BE7ED5BCCF7C1A           0986B8CC034F11F1658A5684A0992AC2ED2C43ABC606F5202C945F373470BE7ED5BCCF7C1A           0986B8CC034F11F1658A5684A0992AC2ED2C43ABC606F5202C945F373470BE7ED5BCCF7C1A           0986B8CC034F11F1658A5684A7DE0565BA           mp <sub>L48</sub> EA2076286588A7D2606438964DED818EE474A90B94473408871880E63EF0596897CEC5701B           mp <sub>L48</sub> <td< td=""><td>m<sub>PL39</sub></td><td>ACE5DD61506047E80FB7D41BD3992DF4D7F18EB46CC145C0E9105428C2F8F299141F5D6669</td></td<>	m <sub>PL39</sub>	ACE5DD61506047E80FB7D41BD3992DF4D7F18EB46CC145C0E9105428C2F8F299141F5D6669
2018B33A0AB9B63DA5D512D64FB58C0E51A1C62C2           mpL41         51A579EED2663A002D32D10A0753173612F4D5BA167D1807C61F25C4D42C063682E8E9DD0           F79D446A046EB575E50FEB228DC52708E694B6           mpL42         CDC644FE4C0C6897604F9D14D714123BF16FFDE49F35F674908CA60653702FE27BCCA2A4           98453AF8661055C8C549EB6A951A8396AD4B94D           mpL43         750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A2933A61C77B86CBF5915B2DA5           mpL44         B749068D78E409082C4C48FE18D4C53429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7FCA99E3338F22F8C662852C0D35AA6           mPL46         D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54I           2DP9734535E58390D9040CF1375FE444CEC29E2           mPL46         828655960C026EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCC384F11F1658AA568FAA0A60C570B3BFA           mPL47         707230E02C633653AAB99288AA2ADE25A1C1B728516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D69648964DE1818EE474A90B94473408871880E63EF0596B9FCFEC3C06           86EAAD2B06C91672FER33C70241A5405B5BBA           mpL49         9CB54599549909835FAB22FD099298C120ACF479F814CCE749079D40688F28101037762F125C           76DA93C567A1FCC0E766452F8185354FDCDE9452           mpL49            927		
mPL41         \$1A579EED2663A002D32D10A0753173612F4D5BA167D1807C61F25C4D42C063682E8E9DD0           mPL42         CDC644FE4C0C6897604FEB228DC52F08E694B6           mPL42         CDC644FE4C0C6897604F9014D714128F16FFF0E49F35F674908CA60653702FE27BCCA2A4           98453AF8661055C8C549EB6A951A8396AD4B94D         mmL43           750A10386C59373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A22933A61C77B86CBF5915B2DA5           mPL44         B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849B7FCA99E3B38F22F8C662852C0D35A6           mPL45         D86E18575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9F34535E5B390D9040CF1375FEA440EC29E2           mPL46         828655960C026EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCCC24F11F1658AA568FAA0A060C5F065BFA           mPL47         D76230E02C4533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0898974B51F8           861D8A1E9F5b62CFFEC309F071A9716B325101B           mPL48         EA207662865BA07D69648964DED818EE474A90894473408871880E63EF0596B9FCFEC3C06           862A6AD2806C91672EFB33C7D0241A5450B59B8A           mPL49         9C5545954990835FAB22FD092928C120AC7A79F814CCE749079D40688F28101037762F125C           7BDA9C5FA1FCC20P76E452FB18534FDCDE94E2           mPL49         9C5545954990835FAB22FD009262C3563185           mPL50 <td< td=""><td>m<sub>PL40</sub></td><td></td></td<>	m <sub>PL40</sub>	
F79D446A046EB3F75E50FEB228DC52F08E694B6           mp <sub>L42</sub> CDC644FE4C0C6897604F9014D714123BF16FFF0E49F35F674908CA60653702FE27BCCA2A4           98453AF8661055C8C549EB6A951A8396AD4B94D           mp <sub>L43</sub> 750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A2933A61C77BB6CBF5915B2DA5           mp <sub>L44</sub> B7490686D78E409082C4C48FE18D4C35429C20ADF96076B92FC4E85490664753DB0891A0E           7FD849B87FCA99E3B38F22F8C662852C0035A6           mp <sub>L44</sub> D86E18575B47D23DA81180654C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9F34535E5B390D9040CF1375FEA44CEC29E2           mp <sub>L46</sub> 282655960C026EC67B683480992AC2ED2C43A8C6006F5220C2945F373470BE7ED5BCCF7C1A           0986BBCCC484F11F1658A4668FAA0A06C5F065B5FA           mp <sub>L47</sub> D76230E02265533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mp <sub>L48</sub> E220766286580A7D56648964DDE1818EE474A90B94473408871880E63EF0596B9FCFEC3C00           86EA6AD2B06C91672EFB33C70241A5450B5988A           mp <sub>L50</sub> 927506304AEC1D6P3360B51FDC24005C07479F814CCE749079D40688F28101037762F125C           7DD4030C5F11FC50076E452F8185534FDCDE94E2           mp <sub>L50</sub> 227506304AEC1D6P3360B51FDC24005A0F33184F65BE17163A3CB9827A35AECEA757D020F1           49377ECD561428A38FEED004EC859C272563185           mp <sub>L50</sub> 227506304AEC1D6P		
mp <sub>L42</sub> CDC644FE4C0C6897604F9D14D714123BF16FFF0E49F35F674908CA60653702FE27BCCA2A4           98453AF8661055C8C549EB6A951A8396AD4894D         mp <sub>L43</sub> 750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C5F           47026A7E79838A2933A61C77BB6CBF5915B2DA5         mp <sub>L44</sub> B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7CCA99E3836P22F8C662852C0035AA6         mp <sub>L45</sub> D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9F34535E5B390D9040CF1375FEA44CEC2D2C2         mpL46         82655980C026EC67B684340992AC2ED2C43A8C606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCCC84F11F1658AA568FAA0A60C5F0B5BFA         0986B8502026EC67B684340992AC2ED2C43A8A6600F5220C2945F373470BE7ED5BCCF7EC3C0E           861D8A1E9F5D62CFFEC309F071A9716B325101B         mp <sub>L46</sub> EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C0CE           86EA6AD2B06C91672EFB33C70241A5450B58BA         mpL36         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C0CE           76DA9C5FA1FCE0E76E452F8185354FDCDE94E2         mpL49         225540543909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA9C5FA1FCE0E76E452F8185354FDCDE94E2         mpL39         96984EC9389810F0E533422A3977519806CD4AD33099BC15A7502D48D49C124FA192A8E5702           77D455112654228389FED004EC6859697871091457628125         f4C7F4710835FD88AFC0399FA2ED40C3CBBAE91C700CBB778C86966C06F3A675C16BDB291           8962873	m <sub>PL41</sub>	
98453AF8661055C8C549EB6A951A8396AD4B94D           mpL43         750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C6F 47026A7E79838A2933A61C77B6C6F5915B2DA5           mpL44         B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E 7FD849BB7FCA99E3B38F22F8C662852C0D35AA6           mpL45         D861B575847D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54 2DF9F34535E5B390D040CF1375FEA44CEC29E2           mpL46         828655960C026EC67B683480992AC2ED2C43ABC6006F5220C2945F373470BE7ED5BCCF7C1A 0986BBCCC84F11F1658AA568FAA0A60C5F0B5BFA           mpL47         D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8 861D8A1E9F5D62CFFEC309F071A9716B325101B           mpL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2B06C91672EFB33C70241A5450B5988A           mpL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE9422           mpL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C27265185           mpL51         9689AEC9938910F0E53342ZA3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5707 CFEB110F542010603CEC9FDF8E626D4FB78CF4           mPL52         A6AAD06E095A9B0BD9F8A2ED40C3CBBAE91C700CBB778C8696CC06F3A675C16BB291 E5F2111005A727206DC6A9684E05665185C398EEB           mPL52         A6AAD06E095A9B0DD6599697871091457E83E0912E7F77A06531C209394D283D18 38662873681DD9C5B7330FED978D47287CA8           mpL54         2016C0A87AD5174372A13BD66599222	~	
mp <sub>L43</sub> 750A10366C595373C5001CA3E4239764B1409D602CF6052B39BC6A3255A15FE06C782C4C6F           47026A7E79838A2933A61C77BB6CBF5915B2DA5           mp <sub>L44</sub> 740686078E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7FCA99E32AC4A9FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7FCA99E32AC4C48FE18D4C354292C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7FCA99E32AC4C48FE18D4C354292C20AADF96076B92FC4E85490664753DB0891A0E           7FD849BB7FCA99E32AC4C48FE18D4C354292C20AADF96076B92FC4E85490664753DB089278A54262202945F373470BE7ED5BCCF7C1A           0986BBCC264F11F1658AA568FAA0A60C5F0B5BFA           mpL47         D76230F02C6533653AAAB999288AA2AD255A1C1BF28516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mpL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06           86EA6AD2D60C61672EFB33C70241A5450659898A           mpL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA90C5FA1FCE0E76E452F8185354FDCDE94E2           mpL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA90C5FA1FCE0E76E452F8165034BEF86E74           mpL59         96B9AEC939891D07E533422A3977519805CD4AD3309BC15A7502D48D49C124FA192A8E570           CFEB110DF5A3242010603CE5C9FDF8E542604FBF8E7CF4           mpL54            96B9AE	MPL42	
47026A7E79838A2933A61C77BB6CBF5915B2DA5           mPL44         B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E 77D849B87FCA99E3838F22F8C6C82582C0D35AA6           mPL45         D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54 2DF9F34538E5B390D9040CF1375FEA44CEC29E2           mPL46         828655960C028EC67B6883480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A 0986BBCCC84F11F1658AA568FAA0A60C5F0B5BFA           mPL47         D76230E02C8533653AAB99B288A22ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8 861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2B06C91672EFB33C70241A5450B59B8A           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCCE0E76E452F8185354FDCDE94E2           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCCE0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563186           mPL51         96B9ACC99389910F0C5539422D40023CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206D649842ED4023CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F211105A8727206C6496842D6655185C3B8EEB           mPL53         CD168b334A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C774710B35FD88AFC0399FAEB07DE89CADD30A           mPL54         2016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BA7C03	mei ve	
mpL44         B7490686D78E409082C4C48FE18D4C35429C20AADF96076B92FC4E85490664753DB0891A0E           mpL45         D86E18575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD541           2DF9F34533E5B390D9040CF1375FEA44CEC29E2           mpL46         828655960C02EEC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCC084F11F1658AA568FAA0A60C5F0B5BFA           mPL47         D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06           86EA6AD2D06C91672EFB33C70241A5450B598BA           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA9C5FA1FCE0E76E432F8185354FDCDE94E2           mPL50         227506304AEC1D6F93669B51FDC3405A05A8194F655BE17163A3CB9827A35AECEA757D020F1           49377ECD561422A38FEED004EC859C272563185           mpL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702           CFEB11DF542010603CE5C910P78E02474B58E59E2A2A4AC4414C40F82874F98A3CBE7E4           mPL52         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7E4           F4C7F4710B35FD88AFC0339FAEB070EB9C4D30A	TTPL43	
7FD849BB7FCA99E3B38F22F8C662852C0D35AA6           mPL45         D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54L2D5753453E5B390D9040CF1375FEA44CEC29E2           mPL46         828655960C026EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A           O986BBCCC34F11F1658A4568FAA0A60C5F0B5BFA           mPL47         D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D6964994DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06           86EA6AD2806C31672EFB33C70241A5450B59B8A           mPL49         CS65459549909835FAB22P0099298C120ACF479F814CCE749079D40688F28101037762F125C           76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1           49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702           CFEB11DF542010603CE5C9FDF8E626D4FB78CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BB291           E5F2111005A87Z7206DC6A9684E05655185C398EEB           mPL53         CD168038AA78DA172991AD33EE2A9880005AFE59E2A2A4AC4414C40F82874F98A3CBE784           F42774710B35FD8AFC0399FAEB070EB9CA2D30A           mPL54         22016CA87AD1549174A8699DDb65599697871091457E83E0912E777A06531C209394D283D18 </td <td>mpi 44</td> <td></td>	mpi 44	
mp <sub>L45</sub> D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54           2DF9F34535E5B330D9040CF1375FEA44CEC29E2         mp <sub>L46</sub> 828655960C026EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A           0986BBCC34F11F1658AA568FAA0A80C5F0B5BFA         0986BBCC34F11F1658AA568FAA0A80C5F0B5BFA           mp <sub>L47</sub> D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8           861D8A1E9F5D62CFFEC309F071A9716B325101B           mp <sub>L48</sub> EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06           86EA6AD2B06C91672EFB33C70241A5450B59B8A           mp <sub>L49</sub> 9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           76DA9C5FA1FCE0E76E452F8185354FDC2B94E2           mp <sub>L50</sub> 227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1           49377ECD561428A38FEED004EC859C272563185           mp <sub>L51</sub> 96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702           CFEB11DF542010603CE5C9F0F8E626D4F8E7E4           mp <sub>L52</sub> A6AAD06E095A9BE0B9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291           E5F2111005A8727206DC6A9684E05655185C398EEB           mp <sub>L53</sub> CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4           r4C7F4710B35FD88AC0399FAEB070EB9CA4D30A           mp <sub>L54</sub> 22016CA87AD1549174A8699D65599697871091457E83E0912E777A0653		
2DF9F34535E5B390D9040CF1375FEA44CEC29E2           mPL46         828655960C028EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1A 0986BBCC084F11F168AA568FAA0A60C5F0B5BFA           mPL47         D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8 861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2B0C91672EFB33C70241A545085988A           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCC0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD0E0655A9BE0BD9F8A2ED40C3CBBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE784 F4C7F4710835F088FC0399FAEB070E9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662873681DD9C5B7330FED978BDA7D487CA8           mPL56         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA33B8D4FBF788B7 90D5PA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493370521223B9D7A76A9D13E9C171017964D16A70C03 4734D49A313CE4DFF020D0760E3153DC485603943	m <sub>PL45</sub>	D86E1B575B47D23DA811806A54C231281F03317830E7BD305D3CAA7D6382A5233104CFD54D2
0986BBCCC84F11F1658AA568FAA0A60C5F0B5BFA           mPL47         D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8 861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D696489964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2B06C91672EFB33C70241A5450B59B8A           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E0565185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D497CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F3 96DFA8252B06429D5DD17142F1C9083ACD702EA0C           mPL57         9DA0180168DB915E9F3597D59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C96619ECB98191D719C187C07BD50342650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFB1E283D81299CC		
mp <sub>L47</sub> D76230E02C8533653AAB99B288AA2ADE25A1C1BF28516C04239240EAF1EFC0B98974B51F8 861D8A1E9F5D62CFFEC309F071A9716B325101B           mp <sub>L48</sub> EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2806C91672EFB33C70241A5450B59B8A           mp <sub>L49</sub> 9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mp <sub>L49</sub> 9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mp <sub>L50</sub> 227506304AEC1D6F93669B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mp <sub>L51</sub> 96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FB78CF4           mp <sub>L52</sub> A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mp <sub>L53</sub> CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mp <sub>L54</sub> 22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mp <sub>L55</sub> B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F3 960FA8252B06429D5DD17142F1C908ACCD702A8           Mp <sub>L55</sub> B940180843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F3 960FA8252B06429D5DD17142F1C908ACCD70243021223B9D7A76A9D13E9C171017964D16A70C03 AD02C3DC9488892C3E365AFCF01BF20B8980BF5C	m <sub>PL46</sub>	828655960C026EC67B683480992AC2ED2C43ABC606F5220C2945F373470BE7ED5BCCF7C1AA
861D8A1E9F5D62CFFEC309F071A9716B325101B           mPL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C06 86EA6AD2B06C91672EFB33C70241A5450B598A           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F1250 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD39099BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D44B788CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E0565185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL54         B9401180843AA6F7827A13BD66C922287E8886C31EB5B90882B472CCD6DA3D8D4FBF78B8F 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL55         B9401180843AA6F7827A13BD66C922287E8886C31EB5B908B2B472CCD6DA3D8D4FBF78B8F 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         B94011808438A6F7827A13BD66C922287E8886C31E85B908B2B472CCD6DA3D8D4FBF78B8F 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D760E3153DC485603943           mPL58         B6C966619EC		
mpL48         EA207662865B8A07D69648964DED818EE474A90B94473408871880E63EF0596B9FCFEC3C066 86EA6AD2B06C91672EFB33C70241A5450B59B8A           mpL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mpL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mpL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mpL52         A6AAD06E095A9BE0B9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E0565185C398EEB           mpL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mpL54         22016CA87AD1549174A8699DD66599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B876 96DFA8252B06429D5D17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C02 AD02C3DC948889C23E365AFCF01BF20B8980BF5C           mpL57         9DA0180168D915E9F33597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mpL59         DBA0180168D9154759724C48578227D448F34E8627DB48FA6ECEA84C552888CC3914CB5 DA0476278750187F	m <sub>PL47</sub>	
86EA6AD2B06C91672EFB33C70241A5450B59B8A           mPL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C 76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F655BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC899C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E0565185C398EEB           mPL53         CD168D384A78DD172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL56         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B876 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C00 AD02C3DC948889C3365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB15E9F3597B59312138E1B5CC000D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB38194JD719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3E68F2636166FDC8D4B1E7132539930297E226 A232B5C279FA5ECA3AC10E24361AF050A453B8		
mpL49         9CB5459549909835FAB22F0D99298C120ACF479F814CCE749079D40688F28101037762F125C           mpL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1           49377ECD561428A38FEED004EC859C272563185           mpL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702           CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mpL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291           E5F2111005A8727206DC6A9684E05655185C398EEB           mpL53         CD168D384A78DA172991AD333E2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4           F4C7F471035FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18           38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F3           96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08           AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E           4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3           2550240AD17CA43BB3943DFFFBF1E283D81299CC	m <sub>PL48</sub>	
76DA9C5FA1FCE0E76E452F8185354FDCDE94E2           mpl_50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020F1 49377ECD561428A38FEED004EC859C272563185           mpl_51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mpl_52         A6AAD06E095A9BE0B09F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mpl_53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mpl_54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mpl_55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mpl_56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mpl_57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mpl_58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mpl_59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E224 A232BB5C279FA5ECA3AC1024361AF050A453B8           mpl_60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mpl_61         7	mpi va	
mPL50         227506304AEC1D6F93569B51FDC3405A0F38194F65BE17163A3CB9827A35AECEA757D020FI 49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mPL53         CD168D384A78DA172991AD333E22A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL54         B9401B0843AA6F7827A13BD66C92227E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL55         B940180843A6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL55         B94018084889C23E365AFCF01BF20889B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB088C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E226 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61	TTPL49	
49377ECD561428A38FEED004EC859C272563185           mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6066619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17C4A3BB3943DFFFBF1E283D81299CC           mPL59         DB082C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	<b>m</b> PL 50	
mPL51         96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E5702 CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C92227E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB088C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	THE LOO	
CFEB11DF542010603CE5C9FDF8E626D4FBF8CF4           mPL52         A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB291 E5F2111005A8727206DC6A9684E05655185C398EEB           mPL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C3 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL51</sub>	96B9AEC9938910F0E533422A3977519B05CD4AD3909BC15A7502D48D49C124FA192A8E57027
E5F2111005A8727206DC6A9684E05655185C398EEB           mpL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mpL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mpL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mpL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mpL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mpL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mpL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mpL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5- DA0476278750187F68FBEA41017E1E58DF1A5A3D           mpL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
mpL53         CD168D384A78DA172991AD333EE2A9880905AFE59E2A2A4AC4414C40F82874F98A3CBE7B4 F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mpL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mpL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mpL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mpL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mpL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mpL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mpL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mpL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL52</sub>	A6AAD06E095A9BE0BD9F8A2ED40C3CBDBAE91C700CBB778C8696CC06F3A675C16BDB2918
F4C7F4710B35FD88AFC0399FAEB070EB9CA4D30A           mPL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18 38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
mpL54         22016CA87AD1549174A8699DD65599697871091457E83E0912E7E77A06531C209394D283D18           38662B73681DD9C5BF330FED978BDA7D487CA8         38662B73681DD9C5BF330FED978BDA7D487CA8           mpL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8           96DFA8252B06429D5DD17142F1C908ACCD70EA0C         96DFA8252B06429D5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08           AD02C3DC948889C23E365AFCF01BF20B89B0BF5C         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E           4734D49A313CE4DFF020D0760E3153DC485603943         4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           2550240AD17CA43BB3943DFFFBF1E283D81299CC         m           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL53</sub>	
38662B73681DD9C5BF330FED978BDA7D487CA8           mPL55         B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8 96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
m <sub>PL55</sub> B9401B0843AA6F7827A13BD66C922287E8886C31EB5B90B82B472CCD6DA3D8D4FBF78B8F8           96DFA8252B06429D5DD17142F1C908ACCD70EA0C           m <sub>PL56</sub> E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08           AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           m <sub>PL57</sub> 9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E           4734D49A313CE4DFF020D0760E3153DC485603943           m <sub>PL58</sub> B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           2550240AD17CA43BB3943DFFFBF1E283D81299CC           m <sub>PL59</sub> DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8           m <sub>PL60</sub> 89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D           m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL54</sub>	
96DFA8252B06429D5DD17142F1C908ACCD70EA0C           mPL56         E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
m <sub>PL56</sub> E42B9EFDC5D09AC27B3C7DA28D02493A70521223B9D7A76A9D13E9C171017964D16A70C08 AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           m <sub>PL57</sub> 9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E 4734D49A313CE4DFF020D0760E3153DC485603943           m <sub>PL58</sub> B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFFBF1E283D81299CC           m <sub>PL59</sub> DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           m <sub>PL60</sub> 89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	MPL55	
AD02C3DC948889C23E365AFCF01BF20B89B0BF5C           mPL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E           4734D49A313CE4DFF020D0760E3153DC485603943         86C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           2550240AD17CA43BB3943DFFFBF1E283D81299CC         89B0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	moi 50	
mpL57         9DA0180168DB915E9F3597B59312198E1B5CC00D743C2ECB0DBAADA3E35A2465ED1EAA9E           4734D49A313CE4DFF020D0760E3153DC485603943         86C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           mpL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           2550240AD17CA43BB3943DFFFBF1E283D81299CC           mpL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8           mpL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D           mpL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	TTPL56	
4734D49A313CE4DFF020D0760E3153DC485603943           mPL58         B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9 2550240AD17CA43BB3943DFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228 A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	MPI 57	
m <sub>PL58</sub> B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9           2550240AD17CA43BB3943DFFFBF1E283D81299CC           m <sub>PL59</sub> DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8           m <sub>PL60</sub> 89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D           m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
2550240AD17CA43BB3943DFFFBF1E283D81299CC           mPL59         DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228           A232BB5C279FA5ECA3AC10E24361AF050A453B8           mPL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D           mPL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL58</sub>	B6C966619ECB98191D719C187C07BD503425650CAA3A2D1F2DF5212B1441D7A0C1D36A4C9C
A232BB5C279FA5ECA3AC10E24361AF050A453B8 m <sub>PL60</sub> 89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5 DA0476278750187F68FBEA41017E1E58DF1A5A3D m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
mpL60         89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB5           DA0476278750187F68FBEA41017E1E58DF1A5A3D           mpL61         70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL59</sub>	DB0E8C41F08A03D477C1AA548799274C4BF3EB68F2636166FDC8D4B1E7132539930297E228B
DA0476278750187F68FBEA41017E1E58DF1A5A3D m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041		
m <sub>PL61</sub> 70A457D1314A278625443EEB52520815EC92CEF17417B97440DCB531BC1CE83212F6327041	m <sub>PL60</sub>	89BCE2DE2974EEBA833CF32F224C85A2891484478527DB48FA6ECEA84C5E288CC3914CB54A
UUFBDE/1F6DB9EUEA88//2E1E4535B6633E4425	m <sub>PL61</sub>	
		JUULBUE/IL0DBAFA68//2E1E4535B6633E4425

Implag         C388460AD54B36C4452CF0433BD347100ACCC24C79C535AD3E1F23FE0425E5           115609AA4B32513CFA76FBA1BC17520F45FD44           Implag         0BAFCADCDF9AA2846681782CD3390CA036A863C78EE1507620BC394D0C680           C007B7956932EA1BFF1A0D0957A30886E67722B1A1C2FA484AD498011599DD57E8E           Implag         8F52802323A8AE56C684658216621600890659F53A5399DA5646BA1032143366           E4F282625725CCB30CF7F50054682EE18000686F46EA904C3692C1D           3720047B4B58AC35384A25087027E141B3126A8           Implag         710F7C39F7D2D3AF1DC341699A5471B003A211AD01547           Implag         9E3483CA8164BD05204971D4D87494CC689033D589EF8055453376E4A8BCC0           Implag         04DA1C64980609338DAAD03F192004AF681690C54505429DBDCDCF10067A85           8692710F79476871C1D233341190528441198EE84816DC           Implag         04DA1C64980609338DAAD03FE920A4F881690C450531045E729F866A82048129DBDCDCF10067A85           8692710F79476871C1D2333412198EE841190E           Implag         04DA1C64980609338DAAD03FE920A4F881690C4504531080712205640898313C91A09           Implag         7A1806D30BDF44410714C3DCA27D8F9EA8A542D8712205640898313C91A09           Implag         7A1806D30BDF44410714C3DCA27D8F9EA8A542D8712205640898313C91A09           Implag         7A1806D30BDF44410714C3DCA27D8F9EA8A542D8712205640898313C91A09           Implag         7A1806D30BDF44410714C3DCA27D8F9EA8A542D8712205640490309240BD426	
C0D7B79266892EA1BFT1A0DD9573A9213AB140D0D2           mPL64         8330226789A62882FC0277430885EG78721A1C2FA48AAD498011599DD578EE           7AA5F60EF47177DBB1632D5387A2896348640B         8F52820323ABA5E6C0B8465821B6218009890550553599DA5646BA103214336E           EFEB2BC5F25CC5B30CF7F50054682EEC3768B8E         8752820323ABA5E6C0B8465821B62180098905455533599DA5646BA103214336E           BFL65         EZE9A292C3C8207B9A4508FD2F667A159F068EEE8D00686F46EA904C3692210           372D4784858A63384A2690727E14183126A8         mmeumon           mPL67         70E7C39FD2D3AE1DCE341699A544D801A8688A6EE47C5CB3630022147DDC00           BA46282472DEC5E104DD520AD4714B030542110AD1247         mmeumon           mPL69         94343CA8164B0053C4971DDA87494CC689033D589EF80E5453376E4A8DC0C           mPL70         0A1A1C649806089380AAD375F290AF861890C54505429DBDCDCF10067AB57           8692710F794765781C1D23334E119BEE8A8160C         mmeumon           mPL70         7A1506D30B7644410714C3DCA27D8F9EA8A542D87122205640B98313C91AD9           3E035F93888BB6E042048C82A9FA8D4C1A7618CF         mmeumon           mPL70         7A1506D206F89153335078E0C6D45310845EF2F9F6C6AE9187419810508B4           9558AD9006391BA8EBA5CFEBD23221CC7514837         meumon           9558AD9006391BA8EBA5CFEBD23221CC7514837           mPL73         F0F6282233191845082C5B4923701456093306C62C650D86CF8EC2           064062C03751B9428C6DA2E603383025F9E404B70	
TAASF60EF47177DBB1632D5387A2896348640B           mPL65         8F52820323ABA5E6C6B465821B621600E980E59F53A599DA5646BA1032143366 E4F82BC5F25CCB300C77F500546828EC8766B8E           mPL66         E2E9A29C3C8207B9A4508FD2F667A159F068EEE8D00686F46EA904C3692C1D 372D4784B58AC33584426087027E1418126A8           mPL67         70E7C39FD2D3AE1DCE341699A544D801A8688A6EE47C5CB3630022147DDC06 8A46282472DECSE104DD520AP114DB0342110AD1247           mPL68         9E343CA81E4B053C4971D4D87494C689033D589EF80E5453376E4A8DCC0 FF7DDC0AD07FCE884D5164371BD03A2110AD1247           mPL69         0FA1C649B060933DAADD3FE920A4F861630C54505429DBDCDCF10067AB57 8692710F794765781C1D233344E119BEE8A8416DC           mPL79         7A18D6D30BDF44410714C3DCA2207BF9EA8A542D87122205640B98313C91AD9 3E035F9388B8BEE04204E022A9FA8D4C1A7618CF           mPL79         FA15E574E94FA2D1301CB14B032650DA8122B76           mPL71         EB9525E10265A48733C8E0E77E459310112A71DCA680F68AC044B64BC0A31D 4855BAD0006391BA8EBA5CEFBD23221CC75143D7           mPL72         E706C6ED2D6F89153330507BE0C6D45310845EF2F9F6C6AE91B7419810508B4 955BAD0006391BA8EBA5CEFBD23221CC75143D7           mPL73         1C68BD82EDA41F06510996EEAC496C5494037DEB           mPL74         16952B2218139F46D8254D1A2C1C22A16BA71EC00C0900ED1442452D7F44C 1B88074BA0B7406510996EEAC495C054945C37DEB           mPL75         1C68BD82EDA81F06418D3837B552A8E3371456D33B06C62C65D86CFBEC2 064062C03751B9423CCD26E0393025F92404B70           mPL76         B309978DD2552C88AABA7838498A6F5A8E9C41E95FFA2215819BF8A5BFE39C 49528270816DC97CCB3DD2582837578458379AA	
E4FB2BCSF25CCB30CF7F500546828EC3768B8E           mPL66         E2E9A29C3CC207B3A4508FD2F667159F068EE8D00686F46EA904C3692C1D           3720D47784858AC3384A26087027E14183126A8           mPL67         70E7C39FD2D3AE1DCE341999A544D801A868A6EE47C5CB3630022147DDC00           8A42B2472DEC5E1040D53C0ADA5114D8065D480D           mPL68         9E3483CAB164BD053C4971D4D87494CC689033D589EF80E5453376E4A8DCC0           F77DDC0AD07FCE8B4D5164371BD03A2110AD1247           mPL69         0AD1C643B0608938DAADA178B030C54505429DBDCDCF10067AB53           8692710F794765781C1D233344E119BEE8A8416DC           mPL70         7A1806D30B0F44410714C30CA22A9FA8D4C1A7618CF           mPL71         EB8525E10265A48733C5E0E77E459310112A71DCA680F68AC044B64BC0A31D0           AFTE574E94FEA2D1301C214803250A8122876           mPL72         E706C6ED2D6F88153035079BE0C6D45310845EF2F9F66CAE91B7419810508B4           9558AD9006391BA8EBA5CEFBD23221CC75143D7           mPL73         DF071A10AC4120CD1431590BEDCFF9483CA7047819590D035D309240BD8426           EC37FD8BC51B4AF32E37FBC47162A2357018751           mPL74         1688074BA0B74C6510996EEAC495C5B49C37DE8           mPL75         1088074BA0B74C6510996EEAC495C5B49C37DE8           mPL76         1088074BA31468406C41209D15608EDA4F1E           MPL77         17685B22038160C22C346BA7162C2346BA71E60C0C900ED1442452D7F44C               B8070810E055C28AABA7338480A57A8E9C41E95FA2215819B	E2A07A560B4716
3720D4784658AC35384A26087027E14183126A8           mPL67         70E7C39FD2D3AE1DCE341699A544D801A8688A6E47C5CB3630022147DDC00 8A462B2472DEC5E104DD520ADA5114DB065D48DD           mPL68         953483CAB1648D053C4971D4D87494CC689033D589EF80E5453376E4A8DCC0 FF7DDC0AD07FCE8B4D5164371B0032110AD1247           mPL69         04DA1C64980608938DAADD3FE920A4F681690C54505429DBDCDCF10067AB57 8692710F794765781C1D233344E119BEE8A8416DC           mPL70         714B0E030BPC4410714C3DCA2DP5PEA8542D87122205640898313C91AD9 35035F93888BEE6D4204BC82A9FA8D4C1A7618CF           mPL70         F1860525E1026648733086CF77E459310112A71DCA680F68AC044B64BC0A31D0 A87F1E574E94FEA2D1301CB14803263DA8122B76           mPL72         E706C6ED2D6F89153335079BE0C6D45310845EF2F9F6C6AE91B7419810508B4 9555BA090D6391BA8EBA5CFFD023221CC75113D7           mPL73         DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D3039240BD8426 EC97FD8BC51B4AF32E37FBC47162A2367D18751           mPL74         F0F952B2238139F46D8254D1A2C1C22A16BA71EC00C0900ED1442452D7F44C 1888074BA0B74C6510996EEAC496C5B49C37DEB           mPL76         B390978DD2552C88AABA7838489A6F5A8E9C14E95FFA2215819BF8A5BF839C 49296611B843A1468406C11020915608EDA4F18           mPL77         1A69EC9D053C7E4BA8F7486CC71867D13F0548D2EBD835824418F11 3AB234DE412347358281C7DE331EDD218B8EA52           mPL78         C358207041A0596D10455326373F9AAFD13F0548D2EBD835824418F11 3AB234DE412347358281C7DE331EDD218B8EA52           mPL78         C35820764DA0596D3438282613940A9535DA5           mPL79         56064033997232C2565EF668111D6084335803322EF8880B931	836CF17E3386C
8A462B2472DEC5E104DD520ADA5114DB065D4B0D           mpL88         9E3483CAB164BD053C4971D4D87494CC689033D589EF80E5453376E4A8BCC00           mF7DDC0ADD7FCE8B4D5164371BD0322110AD1247           mpL89         04DA1C64980609338DAADD3FE920A4F681690C54505429DBDCDCF10067AB57 8692710F794765781C1D233344E119BEE8A8416DC           mpL70         7A18D6D30BDF44410714C3DCA27D8F9EA8A542D87122205640B98313C91AD9 3E035F93B88BBE6D4204BC82A9FA8D4C1A7618CF           mpL71         EB9525E10266A48733C8E0E77E459310112A71DCA680F68AC044B64BC0A31D0 AB7F1E574E94FEA2D1301CB14B03263DA8122B76           mpL72         E706C6ED2D6F89153835079BE0C6D45310845EF2F9F6C6AE91B7419810508BA 955BA09005391BA8EBA5CEFBD2321CC751143D7           mpL73         DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BD8426 EC97FD8BC51B44F32E37FBC47162A2357D18751           mpL74         F0952B223139F46D8254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C 1888074BA0B74C6510996EEAC495C5B49C37DEB           mpL75         1C86BD82DA81705654180337B552A853791456D933B06C62C650D86CFBEC2 064082C03751B9428C0DA2E60338078552A853791456D933B06C62C650D86CFBEC2 064082C03751B9428CDD256326875879AAAFD3           mpL76         B390978DD2552C88ABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C 495966611B843A1468406C41C09D1560BEDA4F1B           mpL77         1A69EC9DD053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B 6184B746C8822958B0A16688F27C8A0E35573F3AAAFD3370C57CA08F86CC28B3GF BC5CAE5BACC4D52004070797C04093384BB18DBA           mpL80         E662E7043867BE250764DA0596D3458257F3F3AAB3D9A732AC57CA08F86CC28B3GF BC5229755D48039F23C22297A0478A079EF12F1498F7448663353033322	079DFF1B32E510
FF7DDC0AD07FCE8B4D5164371BD03A2110AD1247           mPrL99         04DA1C649B0608938DAADD3FE920A4F681690C54505429DBDCDCF10067AB57 8692710F794765781C1D233344E119BEE8A8416DC           mPL70         7A18D6D30BDF44410714C3DCA27D8F9EA8A542D87122205640B98313C91AD9 3E035F93B88BE6D4204BC82A9FA8D4C1A7618CF           mPL71         EB9525E10265A48733C6E0E77E459310112A71DCA680F68AC044B64BC0A31D0 AB7F1E574E94FEA2D1301CB14B03263DA8122B76           mPL72         E706C6ED2D6F89153835079BE0C6D45310845EF2F9F6C6AE91B7419810508BA 955BAD900E391BA8EBA5CEFBD23221CC75143D7           mPL72         E707C6C6ED2D6F89153835079BE0CF9483CA7047B19590D035D309240BDB426 EC97FD8BC51BA473223FFBC47162A2357D18751           mPL73         DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BDB426 EC97FD8BC51BA473223FFBC47162A357D18751           mPL74         F0F952B2238139F46D8254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C 1B88074BA0B74C6510996EEA4955282583753741456D93806C622C650086CFBEC2 064062C03751B9428C6DA2E60383025F9E404B70           mPL75         C686D82ED081F05634B3387B5552A853791456D93806C622C650086CFBEC2 064062C03751B9428C6DA2E60383025F9E404B70           mPL76         B390978DD2552C38AABA7833489A6F58AB9C41E95FFA2215819BF8A5BFE39C 49956611B4843A1468406C41C09D1608EDA471B           mPL77         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B 6184B746C8822958B0A16686F27C8A0E384EFEAD           mPL78         C598E07061BD2763262F379AAAFD13F0548D2EBD835824418F11 3A8234BE41234736281C7DE331EDD21B8BEA52	)6241FC5337A34
mpL69         04DA1C649B0608938DAADD3FE920A4F681690C54505429DBDCDCF10067AB57 8692710F794765781C1D233244E119BEE8A8416DC           mpL70         7418D6D30BDF44410714C3DCA27D8F9EA8A542D87122205640B98313C91AD9 3E035F93B88BBE6D4204BC82A9FA8D4C1A7618CF           mpL71         EB9525E10265A48733C8E0E77E459310112A71DCA680F68AC044B64BC0A31D1 AB771E574294FEA2D1301CB14B03263DA8122B76           mpL72         E706C6ED2D6F89153835079BE0C6D45310845E72F9F6C6AE91B7419810508BA 955BAD9006391BA8EBA50EFBD23221CC75143D7           mpL73         DF071A10AC4120CD1431590BEDCFP9433CA7047B19590D035D309240BDB426 EC97FD8BC51B4AF32E37FBC47162A2357D18751           mpL74         F07952B2238139F46D62541D221C2C2A16BA71EC000C090ED1442452D7F44C 1B88074BA0F4C6510996EEAC495C5B49C37DEB           mpL75         1C686B02EDA81FD6541803837B5522A53791456D93B06C62C6500B6CFBEC2 064062C03751B9428C6DA2E60333025F9E404B70           mpL76         B390978DD2552C88AABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C 49E966611B843A1468406C41C09D1560BEDA4F1B           mpL78         C98B2070816DC97C608DD2583283273F9AAAFD13F0548D2EBD835824418F11 3AB234BE412347358281C7DE331EDD21B8BEA52           mpL78         C98B2070816DC97C608DD2583283E73F9AAAFD13F0548D2EBD835824418F11 3AB234BE412347358281C7DE331EDD2180BEA52           mpL79         56D6408399F23C2E7085E0F68111D69A91A3AD9A732AC57CA08F86CC28B367 BC62E7043867BE250764DA0596034217F00E222E16           mpL8         E662E7043867BE250764DA05960344582A6198408505E6211DD6286E93A37F 573E777E3F71E8D75495D59043217FC0E222E16           mpL8         E662E7043867BE250764AD456389736B2	02183B98C36B0
mp <sub>1.70</sub> 7A18D6D30BDF44410714C3DCA27D8F9EA8A542D87122205640B98313C91AD9 3E035F93B88BBED4204BC82A9FA8D4C1A7618CF           mp <sub>1.71</sub> EB9525E10265A487333C8E0E77E459310112A71DCA6806F68AC044B64BC0A31DU AB7F1E574E94FEA2D1301CB14B03263DA8122B76           mp <sub>1.72</sub> E706C6ED2D6F815333079BE0C6D45310845E72F9F6C6AE91B7419810508BA 9558AD90D6391BA8EBA5CEFBD23221CC75143D7           mp <sub>1.73</sub> DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BD8426 EC97FD88C51B4AF32E37FBC47162A2357D18751           mp <sub>1.74</sub> F07652B2238139F46D6254D11A2C1C22A16BA71EC0C0C900ED1442452D7F44C 1B88074BA0B74C6510996EEAC495C5B49C37DEB           mp <sub>1.76</sub> B390978DD2552C88AABA7838489A6F5A8E9C41E96FFA2215819BF8A5BFE39C 49E966611B843A1468406C41C09D1560BEDA4F1B           mp <sub>1.76</sub> B390978DD2552C88AABA7838489A6F5A8E9C41E96FFA2215819BF8A5BFE39C 49E966611B843A1468406C41C09D1560BEDA4F1B           mp <sub>1.76</sub> B390978DD2552C88AABA7838489A6F5A8E9C41E96FFA2215819BF8A58BFE39C 49E966611B843A1468405C41C09D1560BEDA4F1B           mp <sub>1.76</sub> C95822070816DC97C5D8DD2583263E73F9AAAFD13F0548D2EBD835824418F11 3AB234BE1423473582B1C7DE331ED218B8EA52           mp <sub>1.79</sub> S6D6408399F23C2ED85ED766111D69A91A3AD9A732AC57CA08F86CC28B3CF BCE5CAE5BACC4D520400797C040934A3B818DBDA           mp <sub>1.89</sub> S6063078E250764DA0596D34A582A6198408505E6211DD6286E93A37F 5F3E777E3F71E8D75495D59043217FC0E222E16           mp <sub>1.89</sub> S100336C05F9E5BF35201906C1C5883585E0DAF56130DF5554B9AB21CA15311A E0375EDA49DB7A0C32AB5F1CA427A2D5635FDA5           mp <sub>1.89</sub>	5714BCDDFE1F2
mp <sub>L71</sub> EB9525E10265A48733C8E0E77E459310112A71DCA680F68AC044864BC0A31D0 AB7F1E574E94FEA2D1301CB14B03263DA8122B76           mp <sub>L72</sub> E706C6ED20F6951538530579BE0C6D45310845E72F9F6C6AE91B7419810508BA           g558AD90D6391BA8EBA5CEFBD23221CC75143D7         F071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BDB426           EC97FD8BC51B4AF32E37FBC47162A2357D18751         F0F952B2238139F4608254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C           1888074BA0B74C6510996EEAC495C5B49C37DEB         F0F952B2238139F4608254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C           1888074BA0B74C6510996EEAC495C5849C37DEB         F0F952B22381A31F4608254B3731456093806C62C650D86CFBEC2           064062C03751B9428C6DA2E60333025F9E404B70         F0F952B22388AABA783849A9F5A8E9C41E95FFA2215819BF8A5BFE39C           495966611B843A1468406C41C09D1560BEDA4F1B         F0F922B27288BA016686F27C8A0E384EFEAD           mp <sub>L77</sub> C95B2070816DC97C6D8DD2583263273F9AAFD13F0548D2EBB835824418F11           3AB234BE41234738281C7DE331EDD218B8EA52           mp <sub>L79</sub> 56D6408399F23C2ED85E0F68111D69A91A3D9A732AC57CA08F86CC28B3CF           BC652F074DA0596D34A582A61984098B03656211DD6286E93A37F           573E777E3F71EB075495D59043217FC0E222E16           mp <sub>L80</sub> E6622F074367BE250764DA0596054A582A61984098B03656211DD6286E93A37F           573E777E3F71EB075495D59043217FC02522E16           mp <sub>L83</sub> C05993FAEA9A618781905C53F5CFAA4283390B8038988387883D0482A                   63952DA490DFA0C32A85F1C	9A0B993A5A7BC
mpl_72         E706C6ED2D6F89153835079BE0C6D45310845EF2F9F6C6AE91B7419810508BA           955BAD90D6391BA8EBA5CEFBD23221CC75143D7           mpl_73         DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BDB426           EQ97FD8BC51B4AF32E37FBC47162A2357D18751           mpl_74         F0F952B2238139F46D8254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C           1888074BA0B74C6510996EEAC495C5B49C37DEB           mpl_75         IC686D82EDA81FD65418D3837B5552A853791456D93B06C62C650D86CFBEC2           064062C03751B9428C6DA2E60383025F9E404B70           mpl_76         B390978DD2552C88AABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C           49596611B843A1468406C41C09D1560BEDA4F18           mpl_77         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B           6184B746C8822958B0A16686F27C8A0E3B4EFEAD           mpl_78         C955B207816DC97C6D8DD2583263E73F9AAAFD13F0548D2EBD835824418F11           3AB234BE412347358281C7DE331EDD2188BEA52           mpl_79         56D6408399F23C2ED85E0F68111D69A91A3AD9A732AC57CA08F86CC28B3CF           BCE5CAE5BACC4D5200407079C04033A44BB18DBA           mpl_80         E662E7043867BE250764DA0596D34A582A619B408B505E6211DD6286E93A37F           5F3E7773E3F71E8D75495D59043217FC0E222E16           mpl_81         27D5E681C22297AD478A079EF12F1A98F744B66335303322EF8880B931FBEF180375485059454E561D26A30FF79A205638FDA5           mpl_83         5609602933BFAEA9A61B781B9C5C3F5CFAA4C3339	DO2EEA0F7ACAA
mpl_73         DF071A10AC4120CD1431590BEDCFF9483CA7047B19590D035D309240BDB426           EC97FD8BC51B4AF32E37FBC47162A2357D18751           mpl_74         F0F952B2238139F46D8254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C           1B88074BA0B74C6510996EEAC495C5B49C37DEB           mpl_75         1C86BD82EDA81FD6541BD3837B5552A853791456D93B06C62C650D86CFBEC2           064062C03751B9428C6DA2E60383025F9E404B70           mpl_76         B390978DD2552C88AABA783849A6F5A8E9C41E95FFA2215819BF8A5BFE39C           49E966611B843A1468406C41C09D1560BEDA4F1B           mpl_77         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B           6184B746C882295880A16686F27C8A0E3B4EFEAD           mpl_78         C95B2070816DC97C6D8DD2583263E73F9AAAFD13F0548D2EBD835824418F11           3AB234BE412347358281C7DE331EDD21B8BEA52           mpl_79         56D6408399F23C2ED85EE0F68111D69A91A3AD9A732AC57CA08F86CC28B3CF           BC5CAE5BACC4D52004070797C04093A84BB18DBA           mpl_80         E662E7043867BE250764DA0596D34A582A619B408B505E6211DD6286E93A37F           5F3E777E3F71E8D75495D59043217FC0E222E16           mpl_81         27D5E681C22297AD478A079EF12F1A98F744B66335033322EF8880B931FEBF4           080ED468A0A516D410B183D863795992DA7DDB           mpl_82         5100336C05F9E5BF35201906C1C588858E0DAF56130DF5554B9AB21CA15311A           E03E227EDB27218C566796EAC2F91CC8FCE4B12           mpl_83         C5662	A501C0148BF09
mpl_r4         F0F952B2238139F46D8254D1A2C1C22A16BA71EC0C0C900ED1442452D7F44C           1B88074BA0B74C6510996EEAC495C5B49C37DEB           mpl_r5         1C86BD82EDA81FD65418D3837B5552A853791456D93B06C62C650D86CFBEC2           064062C03751B9428C6DA2E60383025F9E404B70           mpl_r6         B390978DD2552C88AABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C           49E966611B843A1468406C41C09D1560BEDA4F1B           mpl_r7         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B           6184B746C8822958B0A16666F27C8A0E3B4EFEAD           mpl_r8         C95B2070816DC97C6D8DD2583263E73F9AAAFD13F0548D2EBD835824418F11           3AB234BE412347356281C7DE331EDD21B8BEA52           mpl_r9         56D6408399F23C2ED85E0F668111D69A91A3AD9A732AC57CA08F86CC28B3CF           BCE5CAE5BACC4052004070797C04093A48B18DBA           mpl_80         E662E7043867BE250764DA0596D34A582A619B408B505E6211DD6286E93A37F           5F3E777E3F71E8D75495D59043217FC0E222E16           mpl_81         2705E681C222297AD478A079EF12F1A98F744B66335033322EF8880B931FEBF1           80BED468A0A516D410B183D863795992DA7DDB           mpl_82         5100336C05F9E5BF35201906C1C588858E0DAF56130DF5554B9AB21CA15311A           E03F5EDA49DB7A0C32A55F1CA427A2D5635FDA5           mpl_83         C696DC993BFAEA9A61B781B925C3F5CFAA4C333908B03A9B0387883D0482A           5959846E561D26A30F79A205C801485889736B2           mpl_84         D562	64E9A3A2761402
mplrs5         1C866BD82EDA81FD65418D3837B5552A853791456D93B06C62C650D86CFBEC2 064062C03751B9428C6DA2E60383025F9E404B70           mplr76         B390978DD2552C88AABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C 49E966611B843A1468406C41C09D1560BEDA4F1B           mplr77         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B 6184B746C8822958B0A16686F27C8A0E3B4EFEAD           mplr78         C95B2070816DC97C6D8DD2583263273F9AAAFD13F0548D2EBD835824418F11 3AB234BE412347358281C7DE331EDD21B8BEA52           mplr99         56D6408399F23C2ED85EE0F68111D69A91A3AD9A732AC57CA08F86CC28B3CF BCE5CAE5BACC4D52004070797C04093A84BB18DBA           mplr90         56D2647043867BE250764DA0596D34A582A619B408B505E6211DD6286E93A37F 5F3E777E3F71E8D75495D59043217FC0E222E16           mpla1         27D5E681C222297AD478A079EF12F1A98F744B66335303322EF8880B931FEBF8 08BED468A0A516D410B183D863795992DA7DDB           mpls1         271D55E0A420B7A0C32AB5F1CA427A2D5635FDA5           mpls3         C6960C993BFAEA9A61B781B9C5C3F5CFAA4C8339D8B03A9B0387883D0482A 5959846E561D26A30FF79A205C801A8589736B2           mpls4         D562297561AFF42D3168296C1153E4E39BE7B2EB0348BC704625AA083912350 B03222FEDB27218C56F96EAC2F91CC8FCE64B12           mpls4         D562297561AFF42D3168296C1153E4E39BE7B2E00348BC704625AA083912350 B03222FEDB27218C56F96EAC2F91C68FCE64B12           mpls6         DD086768FC01CCA551F8ACC396174675678DA8D           mpls7         88EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6 C93874251E2F079857ADBBCD6452F48800859F5C           mpls8         B2	C798BC65FF4067
mplz76         B390978DD2552C88AABA7838489A6F5A8E9C41E95FFA2215819BF8A5BFE39C           49E966611B843A1468406C41C09D1560BEDA4F1B           mplz77         1A69EC9D053C7E84BAE7A48CCC71857D0C6B06D1065E3EA4633B133AA022B           6184B746C8822958B0A16686F27C8A0E3B4EFEAD           mpL78         C95B2070816DC97C6D8DD2583263E73F9AAAFD13F0548D2EBD835824418F11           3AB234BE412347358281C7DE331EDD21B8BEA52           mpL79         56D6408399F23C2ED85EE0F68111D69A91A3AD9A732AC57CA08F86CC28B3CF           BCE5CAE5BACC4D52004070797C04093A84BB18DBA           mpL80         E662E7043867BE250764DA0596D34A582A619B408505E6211DD6286E93A37F           5F3E777E3F71E8D75495D59043217FC0E222E16           mpL81         27D5E681C222297AD478A079EF12F1A98F744B66335303322EF8880B931FEBF8           80BED468A0A516D410B183D863795992DA7DDB           mpL82         5100336C05F9E5BF35201906C1C588858E0DAF56130DF5554B9AB21CA15311A           E03F5EDA49DB7A0C32AB5F1CA427A2D5635FDA5           mpL84         D562297561AFF42D3168296C1153E4E39BE7B2EB0348BC704625AA083912350           B03222FEDB27218C5696EAC2F91CC8FCE64B12           mpL84         D562297561AFF42D3168296C1153E4E39BE7B2ED0438BSF58037F1859E2FA8C           6916029A2C3F8CAD9A26AE2CC652F48800859F5C           mpL86         923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860           593874251E2F079857ADBED86583A9DCAA6DC               mpL87         B8EF30C	269AFFD772763
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m <sub>PL82</sub> 5100336C05F9E5BF35201906C1C588858E0DAF56130DF5554B9AB21CA15311A           E03F5EDA49DB7A0C32AB5F1CA427A2D5635FDA5           m <sub>PL83</sub> C696DC993BFAEA9A61B781B9C5C3F5CFAA4C8339D8B03A9B0387883D0482A           5959846E561D26A30FF79A205C801A85889736B2           m <sub>PL84</sub> D562297561AFF42D3168296C1153E4E39BE7B2EB0348BC704625AA083912350           B03222FEDB27218C56F96EAC2F91CC8FCE64B12           m <sub>PL85</sub> DD0B6768FC01CC0A551F8ACC36907129623E975AB8B3FF58037F1859E2FA8C           6916029A2C3F8CAD9A26AE2CC652F48800859F5C           m <sub>PL86</sub> 923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860           593B74251E2F079857ADBBCD86583A9DCAA6DC           m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6           DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D7           7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11           5514F5A0954CFBB3C92E25EF783136844998AC5         m           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B8           614A58431DC886C6B9A6F032EE0E0B1306EC4B4         88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	-8322F4302944E
m <sub>PL83</sub> C696DC993BFAEA9A61B781B9C5C3F5CFAA4C8339D8B03A9B0387883D0482A- 5959846E561D26A30FF79A205C801A85889736B2           m <sub>PL84</sub> D562297561AFF42D3168296C1153E4E39BE7B2EB0348BC704625AA083912350 B03222FEDB27218C56F96EAC2F91CC8FCE64B12           m <sub>PL85</sub> DD0B6768FC01CC0A551F8ACC36907129623E975AB8B3FF58037F1859E2FA8C 6916029A2C3F8CAD9A26AE2CC652F48800859F5C           m <sub>PL86</sub> 923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860 593B74251E2F079857ADBBCD86583A9DCAA6DC           m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6 DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D 7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11 5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B8 614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	A90290624CD63
m <sub>PL84</sub> D562297561AFF42D3168296C1153E4E39BE7B2EB0348BC704625AA083912350 B03222FEDB27218C56F96EAC2F91CC8FCE64B12           m <sub>PL85</sub> DD0B6768FC01CC0A551F8ACC36907129623E975AB8B3FF58037F1859E2FA8C 6916029A2C3F8CAD9A26AE2CC652F48800859F5C           m <sub>PL86</sub> 923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860 593B74251E2F079857ADBBCD86583A9DCAA6DC           m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6 DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D 7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11 5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B8 614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	\41AC78D652242
m <sub>PL85</sub> DD086768FC01CC0A551F8ACC36907129623E975AB8B3FF58037F1859E2FA8C           6916029A2C3F8CAD9A26AE2CC652F48800859F5C           m <sub>PL86</sub> 923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860           593B74251E2F079857ADBBCD86583A9DCAA6DC           m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6           DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D7           7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11           5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9           614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	075EE0DE0A79A
m <sub>PL86</sub> 923920696EB3AB413786C41854822282BB83F6900D33A232D470BE198BBF0860           593B74251E2F079857ADBBCD86583A9DCAA6DC           m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6           DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D7           7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11           5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9           614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	C62C2D9D1E850
m <sub>PL87</sub> B8EF30C797D8D2C4EF11244F137D806E556A436626D0115A621C92C34D166A6           DA8FD6F987B1CD5C2AA1C1B045E64475F0F8DABD           m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D7           7AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11           5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9           614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	067B72613300C
m <sub>PL88</sub> E1887001D414405ED6419E9EE1D1D346D924ED57ADF04B31B7948099976B2D77AD44C8783DF0C1EA5AA5D273D1389C8EA22DCC           m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C115514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	68BCEDFA0040
m <sub>PL89</sub> 8C2E379A58AA96748141CA84C35987905F984A49D3AD9BFF7807AC244C16C11           5514F5A0954CFBB3C92E25EF783136844998AC5           m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9           614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	01501A60DFFB28
m <sub>PL90</sub> 78F8A99E0A54E27F51C0726FE7A11EB26B1E29FE65F55AC8AC58011465900B9           614A58431DC8B6C6B9A6F032EE0E0B1306EC4B4           m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	1DF74343C2E1F2
m <sub>PL91</sub> 88F7A31B7B20E0F05CA26E729B4F8A1933962D7BD7BE3E1EB130B28C794C0B	958488A90F6DF
	B4D01CADE0900
6FF97E80117509733F3A9DC225413A0AE08CA662 m <sub>PL92</sub> BE4DFCEAC18905AC8D5DA27A794F88A4D3058D2EFA3B075A819DEAE688EAF 04E7B403D490F0A9030264E1F12B8922C75775E61	F8940A653ED71
m <sub>PL93</sub> 5BA4B79FC4550234D8922963BF3537485E3C8745A5DB90D3E2E454B30FF6111 3C4C628AF846240C2021ACDE547E5A41F666B8	12F508155B7C2B

Code ID	Basic Midamble Codes m <sub>PL</sub> of length <i>P</i> =456
MPL94	00556D35649F7610AB24A43C4F16D6AC0571FD126F11880C5CD72100D730E4E4D6BB73C33F8 37FAF1072743B249ADA2E09598B1EB23F1180A7
m <sub>PL95</sub>	7A0CC9F21BD69CF3023E944545C2176EF0D4F450B765C28359FB8A32137D043D0E5713E67B3 F61320985D2C6106605081F87D2296321468A2F
MPL96	DA669880995B0671201172BABFF141D5854A245E211879EF3038A7C84170DADBD368455F2465 3161E7886E15B253F93E3A3C568EFB17CDEB1A
m <sub>PL97</sub>	4E294E53D1661C1F6F748302A7723DA951C00FDB8BEBBF67A68710BA0F1A255DFB1627059D4 1A23D3961726DE6FEB10E5D209CC4505B209812
M <sub>PL98</sub>	73385DF701414E144768A67EF72924B1653479E962FB1554B7E54BC5284D9B3E41C0C133F878 972230721918AA425501B920B204FECE0C7F8A
MPL99	F4492160805F258CE592DF4D1200566F81D173458D78EA3ABED79A14AF88170DB1D4A9A5931 D2B80C58C27FE17D806E3E6A66CDAAD09F118D4
<b>M</b> PL100	44D562D9012D8B07B8F44596467C11A163982BB7EAEAC184078B6B8CE46B5D7E17C39CEF57 6A025491183017FA09931D070B307B86524B03FF
<b>M</b> PL101	FCAEEFCC49A13B4FFA12C0CC6A2B90CF4F57D78B1E98294B04675C2F0991661FDC61A452A2 47F8C29E0284AA21026F368307375AA2C3F1E12C
<b>M</b> PL102	C486DF0510DCAD5AB86E178A686D398E11A0ECFAC5A326C10129257E5456B22FB8E147E919 0D9929A5DFFE44715FA47D62F04CFC9B1C201414
<b>M</b> PL103	C10AF383DC708E257E15A8AB337BCE684A2F4AC7A22DC2C25C277F8E8D0858E79317CDDD9 AA2EA6CBE604D24AC0945026103E7B4126FD361A4
MPL104	A5C60A181148D9A931B2DDDB9D169648BA54F366B4EFAE88F6861909EE0F07C037EE349D0E C59A823286E366CA3943589EEA7F828C3728085F
m <sub>PL105</sub>	96136AEBD5E28462B0421DF292BA899FFA660D80EA01620D2C7490E5347127884AA3C3D1FF4 4BCEEF6C29EC589CDEF200C5742C5964F8B2B52
m <sub>PL106</sub>	40F63C04ACAD986255D1E16B769A6D4C11A1D075E804BDC0AC61923E9A67F5D741775632807 2455F6E22B1C64E06F367D1B0808295C2D90E22
<b>M</b> PL107	F4B82D413578C4888C5F002CF6D0E03778134A860436551FD57537E4CED334B3C9CEBACE615 238271717AA762448B86FA53D2074BCE35658A7
MPL108	BCCC92D72C920E685530591FC351743D1E23DE044BF81D32650406113E23ECC757FDE4E386 B6E2E7195EE4969717A7BD0812AC312B33A54308
<b>M</b> PL109	6ED59DE0D44370A861CE2B42CF5E578E764A682AB5777905EE027D7160490EDC6C28989B238 05AA697FCD215CB401BC5E4D430624C01B16192
MPL110	DE80C0E273B92CC3C5034F7A20DB3914643C430B425C8B9249EAF73ACE8C3BCF17957242CF 534D87A67D4DC0252275262E737F4095450CFA14
<b>M</b> PL111	9505C4FEF2A397D5059F4729D013292A8321FFFA929ACB0A210D0A13E13061227C44A68FBD8 CE6B66CE3D783363CD039AB35EE52603E09B758
MPL112	E8BE90D7F954B14D8002A4CAC20765ABEED80634498C836D79B0F9338DBC17B28F05CF4E79 136779E1C55AA30B6215F890882887B3B53C23E2
MPL113	9F4B622C1358AE5468DC31E4B2CA320E5E20458C1DE5405BF4F9AD7D45A5BCAA39EC0626FF FC698C16A009CCCB7A18A64E85E70BA71731BA24
MPL114	B91B2624843CF48299AFC2B1442570B41F28F578530D1E322E0B54282372131C71ACB924E707 68A243EEC3200E7A5EBFA77111D9FB07FEA8AE
MPL115	965F42DDA3A4650FE2F5103932B68F166FA424B9F0F7045311D962C2A9F66B9BC6C66FB480F 9800354E0C54A72251071422CF1DFC44F94C00C
M <sub>PL116</sub>	08ADCE48699FC30FA0788073BDAADB9177BBB4C1CED41F93085218364B8BAD8488561EF0FE 1B0DDAA403C602494CB35697D62AA0A2B93A64CF
MPL117	9A313BED80B1220D77C8ADA4B2E0B3D284A5120A94B741380923C78D3AD32BC3E71EC6EEA 520E9D447D8727697598BB987F17506F482003ABD
MPL118	24C9AD4C14EFEC002A3473FCAB04E492F2E269161A2960BA8AF09FD710B444A40C4E8B1384 18E62301E91FBA97AFDC58759A76D00F676736C7
MPL119	6514C7733711CE4942CD2123AB37186EB7FECB7E78ABB28744864942FCF4C0F810054AF55B1 042EB53064F0857C61D85B2CF0D2DC5826AF22F
MPL120	B2C80CDC83E48C36BC6FDAB8661208EAD392F3A0571BE41DFAD765E744932ADEA50061E66 C05498A5381B2A1F1B446587089DC4E4A2DF03D82
<b>M</b> PL121	639368BA75CC709A3D9F28EDA237E32C2017A9BF1E382045B9426AEE0A4049DCB4E1D7EBE4 647B855212824557497CFA039885A3BA42F98F63
MPL122	6A70DDC17D0C8024B1C853F0C1948561EF32510151BE0C63BCA9171F20217891D1021EE7258 6CAFF557F8973336913A94A2A699B8740B054B8
MPL123	2E32E3A35CCD001172CE310B63B4E406126045A0FA3795BE3E3D9B56F72405FC94FD8994681 8BAECD24A61BABBBE2D23052AB01EF73CA0CF4A
MPL124	829395C35205A480AC1351C25E234BF52D384A3DE1C5138A650A6F82F739757D812D9C38231 AB9FD81AA0648B11F6F6113F9312C57624FC746
m <sub>PL125</sub>	D98FFE19C0AAAAB0571A9075ECDFD3E7373F5255DC669116A8C6913F0123E598F930934C5F6 A601C37C529C371A0C391B59AC5A9E286D04011

Code ID	Basic Midamble Codes m <sub>PL</sub> of length <i>P</i> =456
m <sub>PL126</sub>	C1A108192BCE96C2430A63C189BB33856BE6B8B524703FCB205DAEF37EF544CD43CA09B618
	1B417398083FF2F781BA4AE89A5CA291DB928D71
m <sub>PL127</sub>	42568DF9F61849BF9E7DEE750604BE2E0BC16CC464B1CDE15015E01D6498E9F3E6D6950E58
	24651F212BA0057CE9529B9CCAB88D8136B8545E

# A.3 Association between Midambles and Channelisation Codes

The following mapping schemes apply for the association between midambles and channelisation codes if no midamble is allocated by higher layers. Secondary channelisation codes are marked with a (\*). These associations apply both for UL and DL.

### A.3.1 Association for Burst Type 1/3-and K=16 Midambles

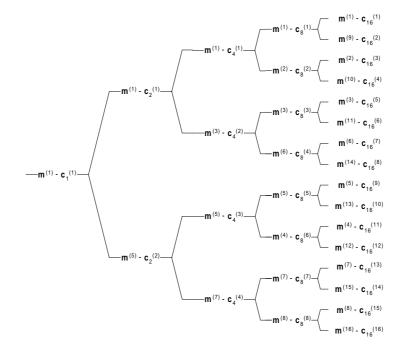
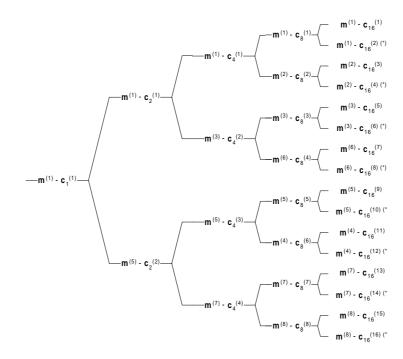
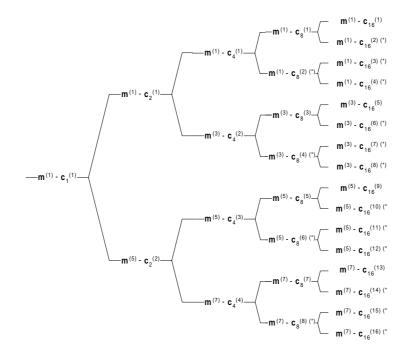


Figure A-1: Association of Midambles to Spreading Codes for Burst Type 1/3 and K=16

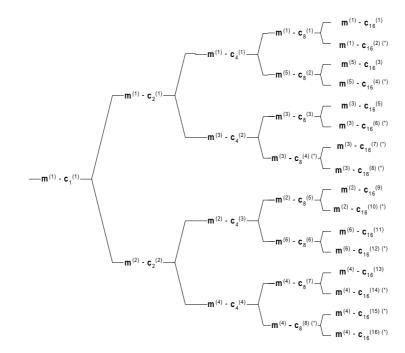




### A.3.3 Association for Burst Type 1/3 and K=4 Midambles

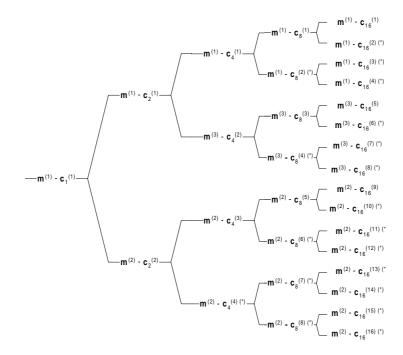






42

Figure A-4: Association of Midambles to Spreading Codes for Burst Type 2 and K=6



#### Figure A-5: Association of Midambles to Spreading Codes for Burst Type 2 and K=3

Note that the association for burst type 2 can be derived from the association for burst type 1 and 3, using the following table:

Burst Type 1/3	m(1)	m(2)	m(3)	m(4)	m(5)	m(6)	m(7)	m(8)
Burst Type 2	m(1)	m(5)	m(3)	m(6)	m(2)	m(4)	-	-

3GPP TSG RAN Meeting #9DocumentR1-00-1089Hawaii, USA, 20-22 September 2000e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx						
	CHANGE REQUEST Please see embedded help file at the l page for instructions on how to fill in the					
	25.221 CR 031r1 Current Version: 3.	3.0				
GSM (AA.BB) or 3G	G (AA.BBB) specification number↑ ↑ CR number as allocated by MCC support te	am				
For submission	Il meeting # here for information non-strategic	(for SMG use only)				
Fo Proposed chang (at least one should be r		Network				
Source:	TSG RAN WG1Date:22/08	3/2000				
Subject:	Number of codes signalling for the DL common midamble case					
Work item:						
Category:       F         A         (only one category       B         shall be marked       C         with an X)       D	A Corresponds to a correction in an earlier release Relea B Addition of feature Relea C Functional modification of feature Relea	se 96 se 97 se 98 se 99 <b>X</b>				
<u>Reason for</u> change:	<ul> <li>By using variable shifts instead of a fixed shift to derive the common methe UE's present in a timeslot, the number of simultaneously channelisation codes can be encoded and signalled to all UE's. The kinche number of channelisation codes in turn simplifies the implementation techniques in the UE, e.g. in the DL.</li> <li>Section 5.6 in TS25.221 on midamble ellocation in LL and DL is present.</li> </ul>	employed nowledge of nentation of				
I	<ul> <li>Section 5.6 in TS25.221 on midamble allocation in UL and DL is proprevised for more clarity.</li> </ul>					
Clauses affected	ed: Section 5.6; Insertion of a new annex B, previous annex B moved to annex D	to annex C,				
Other specs	Other 3G core specifications $X \rightarrow List of CRs: CR480 to TS25.331 CR169 to TS25.423 CR199 to TS25.433$					
	Other GSM core specifications $\rightarrow$ List of CRs:MS test specifications $\rightarrow$ List of CRs:BSS test specifications $\rightarrow$ List of CRs:O&M specifications $\rightarrow$ List of CRs:					
comments:						

### 5.6 Midamble Allocation for Physical Channels

In general, mMidambles are part of the physical channel configuration which is performed by higher layers. Three different midamble allocation schemes exist:

- UE specific midamble allocation: A UE specific midamble for DL or UL is explicitly assigned by higher layers.
- Default midamble allocation: The midamble for DL or UL is allocated by layer 1 depending on the associated channelisation code.
- Common midamble allocation: The midamble for the DL is allocated by layer 1 depending on the number of channelisation codes currently being present in the DL time slot.

Optionally, iIf no-a midamble is not explicitly allocated assigned by higher layers and the use of the common midamble allocation scheme is not signalled by higher layers, a default the midamble allocation shall be used allocated by layer 1, based on the default midamble allocation scheme. This default midamble allocation scheme is given by a fixed association between midambles and channelisation codes, see clause A.3, and shall be applied individually to all channelisation codes within one time slot. Different associations apply for different burst types and cell configurations with respect to the maximum number of midambles.

### 5.6.1 Midamble Allocation for DL Physical Channels

Physical channels providing the beacon function shall always use the reserved midambles, see 5.45. For DL physical channels that are located in the same time slot as the P-CCPCH, midambles shall be allocated based on the default midamble allocation scheme, using the association for burst type 1 and K=8 midambles. For all other DL physical channels, the midamble allocation is explicitly signalled assigned by higher layers or given by default allocated by layer 1.

#### 5.6.1.1 Midamble Allocation by signalling from higher layers

Either a common or a UE specific midambles shall-may be signalled by higher layers to the UE's as a part of the physical channel configuration. Common or UE specific midambles may be applied only if the conditions in subclauses 5.6.1.1.1 and subclause 5.6.1.1.2 hold respectively. If the midamble is not signalled as a part of the physical channel configuration, midamble allocation by default shall be used.

#### 5.6.1.1.1 Common Midamble

A common midamble may be assigned to all physical channels in one time slot, if:

<del>or</del>

midambles are not used for PDSCH physical layer signalling.

#### 5.6.1.1.2 UE specific Midamble

An individual midamble may be assigned to each of the UEs in one time slot, if:

- multiple UEs use the physical channels in one <u>DL</u> time slot; and
- beamforming is applied to all of these DL physical channels; and
- no closed loop TxDiversity is applied to any of these DL physical channels;

<sup>-</sup> multiple UEs use the physical channels in one time slot; and

- PDSCH physical layer signalling based on the midamble is used.

#### 5.6.1.2 Midamble Allocation by defaultlayer 1

#### 5.6.1.2.1 Default midamble

If noa midamble is not explicitly allocated assigned and the use of the common midamble allocation scheme is not signalled by higher layers by signalling, the UE shall derive the midamble from the associated channelisation code and shall use an individual midamble for each channelisation code. For each association between midambles and channelisation codes in annex A.3, there is one primary channelisation code associated to each midamble. A set of secondary channelisation codes is associated to each primary channelisation code. All the secondary channelisation codes within a set use the same midamble as the primary channelisation code to which they are associated.

Higher layers shall allocate the channelisation codes in a particular order. Primary channelisation codes shall be allocated prior to associated secondary channelisation codes. If midambles are reserved for the beacon functionchannels, all primary and secondary channelisation codes that are associated with the reserved midambles shall not be used.

Primary and its associated secondary channelisation codes shall not be allocated to different UE's.

In the case that secondary channelisation codes are used, secondary channelisation codes of one set shall be allocated in ascending order, with respect to their numbering.

#### 5.6.1.2.2 Common Midamble

The use of the common midamble allocation scheme is signalled to the UE by higher layers as a part of the physical channel configuration. A common midamble may be assigned by layer 1 to all physical channels in one DL time slot, if:

a single UE uses all physical channels in one DL time slot (as in the case of high rate service);

<u>or</u>

- multiple UEs use the physical channels in one DL time slot; and
- no beamforming is applied to any of these DL physical channels; and
- no closed loop TxDiversity is applied to any of these DL physical channels; and
- midambles are not used for PDSCH physical layer signalling.

The number of channelisation codes currently employed in the DL time slot is associated with the use of a particular common midamble. Different associations apply for different burst types and cell configurations with respect to the maximum number of midambles, see annex B.

#### 5.6.2 Midamble Allocation for UL Physical Channels

If the midamble is <del>part of the physical channel configurationexplicitly assigned by higher layers</del>, an individual midamble shall be assigned to all UE's in one <u>UL</u> time slot.

If no midamble is <u>explicitly allocated assigned</u> by higher layers, the UE shall derive the midamble from the assigned channelisation code as for DL physical channels. If the UE changes the SF according to the data rate, it shall always vary the channelisation code along the lower branch of the OVSF tree.

### Annex B (normative) Signalling of the number of channelisation codes for the DL common midamble case

The following mapping schemes shall apply for the association between the number of channelisation codes employed in a timeslot and the use of a particular midamble shift in the DL common midamble case. In the following tables the presence of a particular midamble shift is indicated by '1'. Midamble shifts marked with '0' are left unused. Mapping schemes B.3 and B.4 are not applicable to beacon timeslots where a P-CCPCH is present, because the default midamble allocation scheme is applied to these timeslots. Note that in mapping schemes B.3 and B.4, the fixed and pre-allocated channelisation code for the beacon channel is included into the number of indicated channelisation codes.

<u>m1</u>	<u>m2</u>	<u>m3</u>	<u>m4</u>	<u>m5</u>	<u>m6</u>	<u>m7</u>	<u>M8</u>	<u>m9</u>	<u>m10</u>	<u>m11</u>	<u>m12</u>	<u>m13</u>	<u>m14</u>	<u>m15</u>	<u>m16</u>	
1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1 code</u>								
<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	2 codes							
<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	3 codes						
<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	4 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	5 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>6 codes</u>
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	7 codes
<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	8 codes						
<u>0</u>	<u>1</u>	<u>0</u>	9 codes													
<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	10 codes								
<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	11 codes									
<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	12 codes									
<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	13 codes									
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	14 codes									
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	15 codes									
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	16 codes									

B.1 Mapping scheme for Burst Type 1 and K=16 Midambles.

B.2 Mapping scheme for Burst Type 1 and K=8 Midambles.

<u>M1</u>	<u>m2</u>	<u>m3</u>	<u>m4</u>	<u>m5</u>	<u>m6</u>	<u>m7</u>	<u>m8</u>	
1	<u>0</u>	1 code or 9 codes						
<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	2 codes or 10 codes

45

<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	3 codes or 11 codes
<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	4 codes or 12 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	5 codes or 13 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	6 codes or 14 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	7 codes or 15 codes
<u>0</u>	1	8 codes or 16 codes						

#### B.3 Mapping scheme for beacon timeslots and K=16 Midambles.

<u>m1</u>	<u>m2</u>	<u>m3</u>	<u>M4</u>	<u>m5</u>	<u>m6</u>	<u>m7</u>	<u>M8</u>	<u>m9</u>	<u>m10</u>	<u>m11</u>	<u>M12</u>	<u>m13</u>	<u>m14</u>	<u>m15</u>	<u>m16</u>	
1	<u>x(*)</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1 codes or 13 codes						
1	<u>x(*)</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	2 codes or 14 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	3 codes or 15 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	4 codes or 16 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5 codes</u>
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>6 codes</u>
1	<u>x(*)</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	7 codes							
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	8 codes							
1	<u>x(^)</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	9 codes							
1	<u>x(^)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	10 codes							
1	<u>x(^)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	11 codes							
1	<u>x(^)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	12 codes							

#### (\*) In case of Block-STTD encoding for the P-CCPCH, midamble shift 2 is used by the diversity antenna

B.4 Mapping scheme for beacon timeslots and K=8 Midambles.

<u>m1</u>	<u>m2</u>	<u>m3</u>	<u>m4</u>	<u>m5</u>	<u>m6</u>	<u>m7</u>	<u>M8</u>	
1	<u>x(*)</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1 or 7 or 13 codes</u>
1	<u>x(*)</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	2 or 8 or 14 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	3 or 9 or 15 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	4 or 10 or 16 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	5 codes or 11 codes
1	<u>x(*)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	6 codes or 12 codes

(\*) In case of Block-STTD encoding for the P-CCPCH, midamble shift 2 is used by the diversity antenna

#### B.5 Mapping scheme for Burst Type 2 and K=6 Midambles.

<u>m1</u>	<u>m2</u>	<u>m3</u>	<u>m4</u>	<u>m5</u>	<u>m6</u>	
1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1 or 7 or 13 codes</u>
<u>0</u>	1	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	2 or 8 or 14 codes
<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	3 or 9 or 15 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	4 or 10 or 16 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	<u>0</u>	5 or 11 codes
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	1	6 or 12 codes

#### B.6 Mapping scheme for Burst Type 2 and K=3 Midambles.

<u>m1</u>	<u>m2</u>	<u>m3</u>	
1	<u>0</u>	<u>0</u>	<u>1 or 4 or 7 or 10 or 13 or 16 codes</u>
<u>0</u>	<u>1</u>	<u>0</u>	2 or 5 or 8 or 11 or 14 codes
<u>0</u>	<u>0</u>	<u>1</u>	3 or 6 or 9 or 12 or 15 codes

### Annex BC (Informative): CCPCH Multiframe Structure

In the following figures B.1 to B.3 some examples for Multiframe Structures on Primary and Secondary CCPCH are given. The figures show the placement of Common Transport Channels on the Common Control Physical Channels. Additional S-CCPCH capacity can be allocated on other codes and timeslots of course, e.g. FACH capacity is related to overall cell capacity and can be configured according to the actual needs. Channel capacities in the annex are derived using bursts with long midambles (Burst format 1). Every TrCH-box in the figures is assumed to be valid for two frames (see row 'Frame #'), i.e. the transport channels in CCPCHs have an interleaving time of 20msec.

The actual CCPCH Multiframe Scheme used in the cell is described and broadcast on BCH. Thus the system information structure has its roots in this particular transport channel and allocations of other Common Channels can be handled this way, i.e. by pointing from BCH.

Release 1999					49	9							3G 1	<b>FS</b> 2	25.22	1 V3	3.3.0	(200	00-0	6)																
Frame #	0 1	23	3 4	5 67	89		12 13		16 17	18 19	20 21	22 23	24 25	26 27	28 29	30 31	32 33	34 35	36 37	38 39	40 41	42 43	44 45	46 47	48 49	50 41	52 53	54 55	56 57	58 59	60 61	62 63	64 65	66 67	68 69	70 71
CCPCHs in TS k, Code 0																																				
CCPCHs in TS k+8, Co 0																																				
BCH transporting BCCH	12.7	- 71 k	bps				F/	- ACF	f tra	nsp	ortir	ng B	BCCI	H 2.	71 k	thos					PC	H 13		bps			PI	CH	2.7	L kb	DS	I	FAC		7.1	kbr

#### Figure B.1: Example for a multiframe structure for CCPCHs that is repeated every 72th frame

Frame #	01	23	3 4	15 0	57	89	10 11	12 13	14 15	16 17	18 19	20 21	22 23	24 25	26 27	28 29	30 31	32 33	34 35	36 37	38 39	40 41	42 43	44 45	46 47	48 49	50 41	52 53	54 55	56 57	58 59	60 61	62 63	64 65	66 67	68 69	70 71
CCPCHs in TS k, Code 0																																					
CCPCHs in TS k, Code n																																					
CCPCHs in TS k+8, Co 0																																					

BCH transporting BCCH 2,71 kbps	FACH transporting BCCH 2,71 kbps	PCH 13,5kbps	PICH 2,71 kbps	FACH 51,5 kbps
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#### Figure B.2: Example for a multiframe structure for CCPCHs that is repeated every 72th frame, n=1...7

Frame #	01	23	4	5 67	89	12 13			18 19	20 21	22 23	24 25	26 27	28 29	30 31	32 33	34 35	36 37	38 39	40 41	42 43	44 45	46 47	48 49	50 41	52 53	54 55	56 57	58 59	60 61	62 63	64 65	66 67	68 69	70 71
CCPCHs in TS k, Code 0																																			
CCPCHs in TS k+8, Co 0																																			
BCH transporting BCCH	[27	1 1-1-1	ne			E	A CE	Itro	nen	rtin	a P	CCH	<b>J</b> 1 ′	255	khn	0				PCH	12	51-1	200			DI	CH	2 7 1	khi		Б	AC	ц 29	2 5 1	hn

Figure B.3: Example for a multiframe structure for CCPCHs that is repeated every 72th frame

## Annex <u>CD</u> (informative): Change history

					Change history		
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
14/01/00	RAN_05	RP-99591	-		Approved at TSG RAN #5 and placed under Change Control	-	3.0.0
14/01/00	RAN_06	RP-99691	001	02	Primary and Secondary CCPCH in TDD	3.0.0	3.1.0
14/01/00	RAN_06	RP-99691	002	02	Removal of Superframe for TDD	3.0.0	3.1.0
14/01/00	RAN_06	RP-99691	006	-	Corrections to TS25.221	3.0.0	3.1.0
14/01/00	RAN_06	RP-99691	007	1	Clarifications for Spreading in UTRA TDD	3.0.0	3.1.0
14/01/00	RAN_06	RP-99691	800	-	Transmission of TFCI bits for TDD	3.0.0	3.1.0
14/01/00	RAN_06	RP-99691	009	-	Midamble Allocation in UTRA TDD	3.0.0	3.1.0
14/01/00	RAN_06	RP-99690	010	-	Introduction of the timeslot formats to the TDD specifications	3.0.0	3.1.0
14/01/00	-	-	-		Change history was added by the editor	3.1.0	3.1.1
31/03/00		RP-000067	003	2	Cycling of cell parameters	3.1.1	3.2.0
31/03/00		RP-000067	011	-	Correction of Midamble Definition for TDD	3.1.1	3.2.0
31/03/00	RAN_07	RP-000067	012	-	Introduction of the timeslot formats for RACH to the TDD	3.1.1	3.2.0
					specifications		
31/03/00		RP-000067		-	Paging Indicator Channel reference power	3.1.1	3.2.0
31/03/00		RP-000067		1	Removal of Synchronisation Case 3 in TDD	3.1.1	3.2.0
31/03/00		RP-000067		1	Signal Point Constellation	3.1.1	3.2.0
31/03/00		RP-000067		-	Association between Midambles and Channelisation Codes	3.1.1	3.2.0
31/03/00	RAN_07	RP-000067	017	-	Removal of ODMA from the TDD specifications	3.1.1	3.2.0
26/06/00		RP-000271	018	1	Removal of the reference to ODMA	3.2.0	3.3.0
26/06/00		RP-000271	019	-	Editorial changes in transport channels section	3.2.0	3.3.0
26/06/00		RP-000271	020	1	TPC transmission for TDD	3.2.0	3.3.0
26/06/00		RP-000271	021	-	Editorial modification of 25.221	3.2.0	3.3.0
26/06/00	RAN_08	RP-000271	023	-	Clarifications on TxDiversity for UTRA TDD	3.2.0	3.3.0
26/06/00	RAN_08	RP-000271	024	-	Clarifications on PCH and PICH in UTRA TDD	3.2.0	3.3.0