

SS7

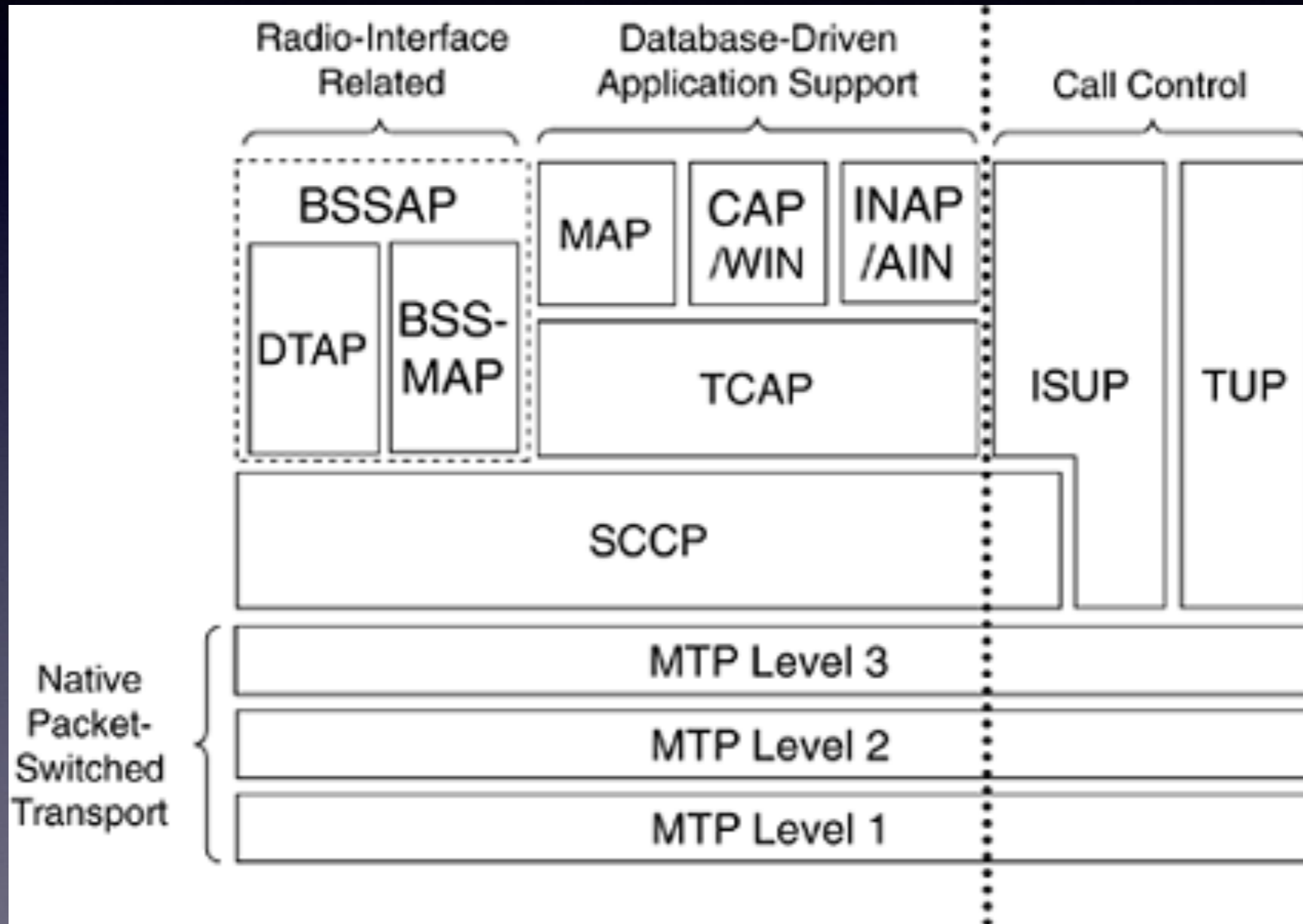
Signalling System No. 7

onwaves

sysmocom

2denker

Stack



ASN.1 Grammar

```
-- Generated by Asnp, the pretty-printer of France Telecom R&D (http://asn1.elibel.tm.fr/asnp/)
Remote-Operations-Generic-ROS-PDUs {joint-iso-itu-t remote-operations(4)
generic-ROS-PDUs(6) version1(0)}
```

DEFINITIONS IMPLICIT TAGS

::=

BEGIN

-- exports everything

IMPORTS

OPERATION, ERROR

**FROM Remote-Operations-Information-Objects {joint-iso-itu-t
remote-operations(4) informationObjects(5) version1(0)};**

ROS{Invokeld:InvokeldSet, OPERATION:Invokable, OPERATION:Returnable} ::=

CHOICE {

invoke [1] Invoke{{InvokeldSet}, {Invokable}},

returnResult [2] ReturnResult{{Returnable}},

returnError [3] ReturnError{{Errors {{Returnable}}}},

reject [4] Reject

}

...

ASN.1

- 384 production rules
- all rules without xml and constraints
- done with petit parser
- generates a runtime model of a parser

TCAP

Transaction Capability Application Part

- session handling called Dialogue/Transaction
- state machine for session status
- RPC-like mechanism (ASN.1 grammar)

HLR

Home Location Register

- Registry of mobile customers
- Needed to „log into“ a GSM network (your SIM card information is stored here)

AuC

Authentication center

- authenticates a SIM card
- holds secret key for a customer
- authenticates cryptographically

HLR/AuC

- pharo 3
- garage database driver
- deployed in a real GSM network