Overview of 3GPP

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Acknowledgement

These slides are based on a presentation by:

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Subjects

The History

The current structure in 3GPP

- *SDOs, MRPs, TSGs*
- *Integration of GSM*
- *How it works*

Achievements

- *Release ‘99*
- *Open Issues*

Organisational steps to UMTS?

- < 1991: ITU-R TG 8/1 works on FPLMTS, no activities in Europe
- 1991: SMG5 is started. Only little attention by GSM operators, although under ETSI SMG.
- 1997: SMG5 is disbanded and work is spread to other STC's.
- 12/1998: 3GPP Inauguration Meeting in Sophia Antipolis.
- 03/1999: Election of Chair persons.
- Since Summer 1999: Migration of GSM specifications to 3GPP.
- 12/1999: Approval of 1st Release 3rd Generation.

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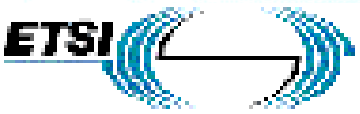
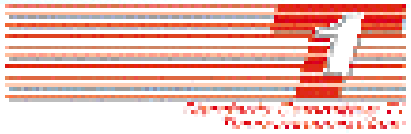
3GPP Partner Organisationen





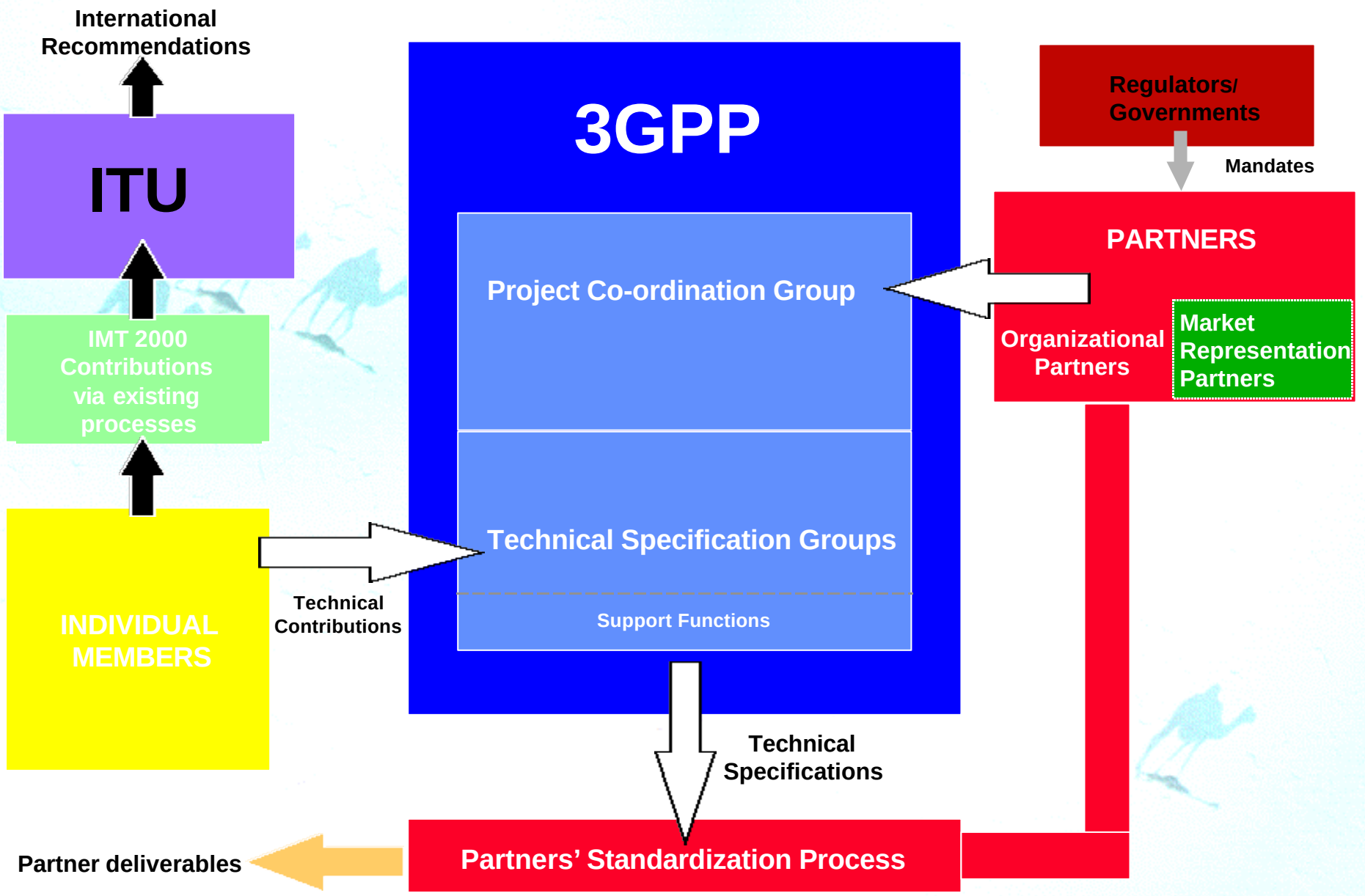
CWTS

A GLOBAL INITIATIVE

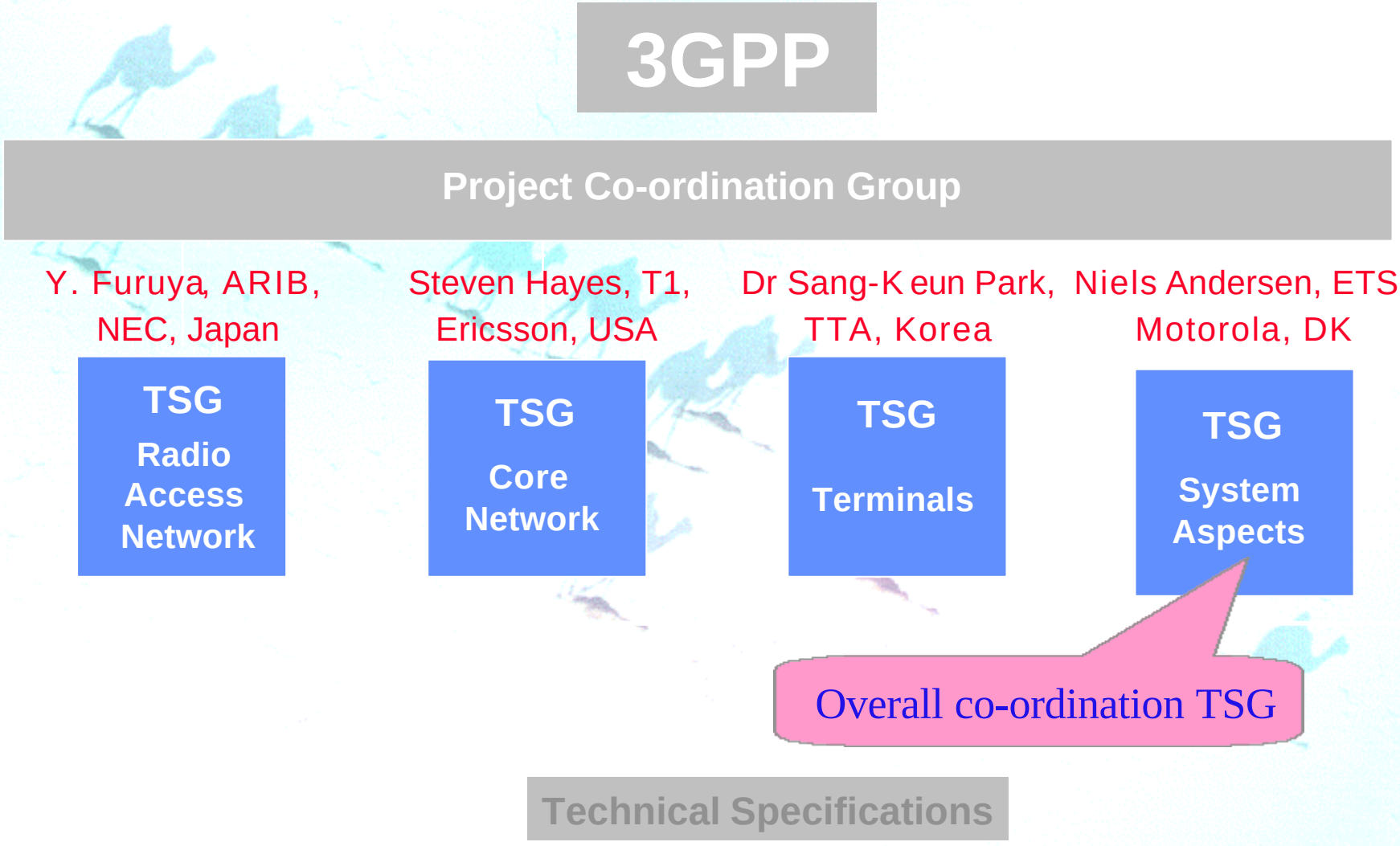
3GPP
Market Representation Partner

- ***Global Mobile Suppliers Association - GSA***
- ***GSM Association***
- ***UMTS Forum***
- ***Universal Wireless Communications Consortium (UWCC)***
- ***IPv6 Forum***

External interfaces, contributions



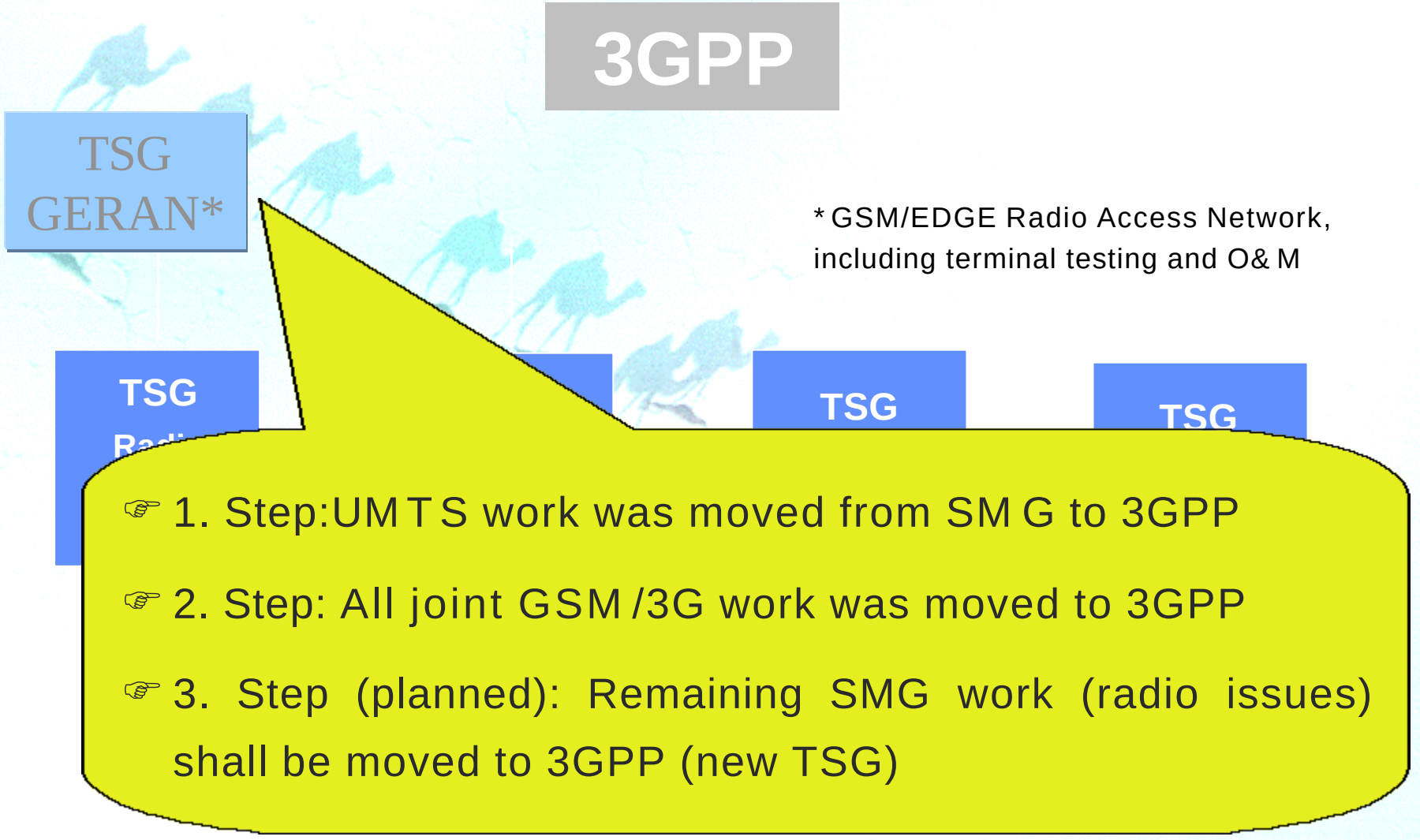
3GPP Structure (17.03.2000)



How the structure is optimised - System Aspects & Services

WG1 Services: Alan Cox, Vodafone Airtouch (also chairman SMG1)	SMG1: GSM
WG2 Architecture: Teuvo Jarvela, Nokia	SMG12: GSM
WG3 Security: Michael Walker, Vodafone Airtouch (also chairman SMG10)	SMG10: GSM
WG4 Codec: A Ohana, BellsSouth	SMG11: GSM
WG5 Network Management: A Yuhan, VoiceStream	[SMG6: GSM]

Remaining SMG work area will be migrated



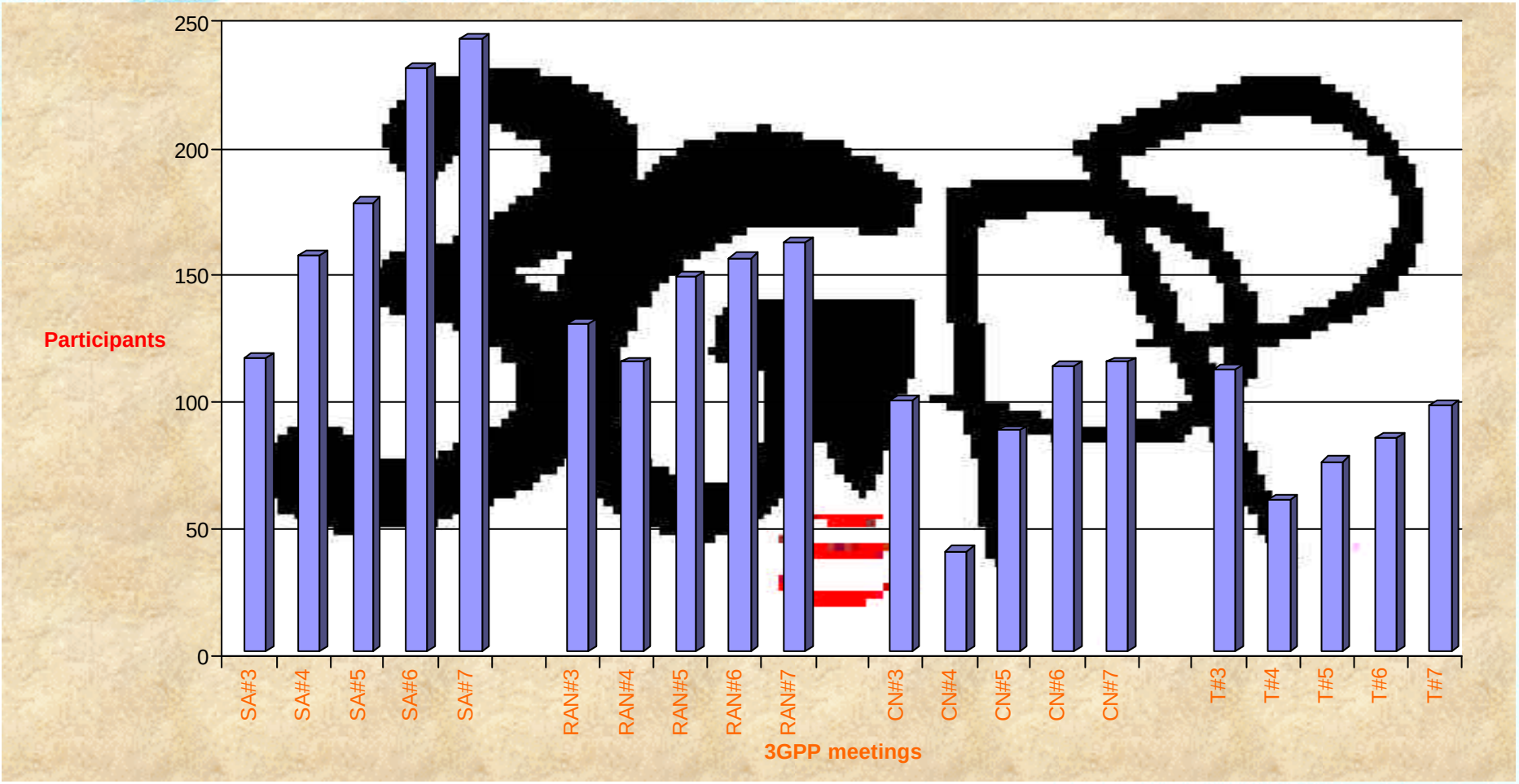
MCC - Mobile Competence Center

- *4 TSGs and 16 Working Groups need support*
- *TSGs meet 4 times a year, working groups meet at least in 6 weeks distance*
- *Plus numerous electronic meetings*
- *MCC members are responsible support the chairs, take minutes, ensure consistency of specifications, integrate CRs*
- *A very efficient support team has been set up*
- *Headed by Adrian Scrase*
- *28 highly qualified people altogether, mainly seconded from SDO partner organisations (Michael Clayton from GSMA)*

How TSGs & Working Groups work

- There is a very high frequency of meetings
- Meetings tend to be 12 Hours/day
- Meetings are fully electronic (LAN & CD-ROM)
- Work is contribution driven by delegates
- Groups work based on consensus, officials moderate
- Liaison to all relevant groups -> WAP Forum, IETF, IPv6 ...

One TSG meeting session (6 days)
~600 delegates



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Status 3G Release 1999

- *R99 has been approved in December 1999*
- *The primary objective "to provide a complete set of specifications for Wideband (TDD and FDD) cellular access to a core network which is evolved from the GSM R98 platform" is met.*
- *All the groups were keen to complete work, tracking is performed on a "open issue list" basis, not on the basis of what has been completed.*

R99 Headlines

- *UTRAN for TDD & FDD, PS up to 2Mbit/s, CS up to 64kbit/s.*
- *Several features to support internet-type services in PS domain (IPv4, DHCP, IP Multicast, ...)*
- *Several features added to CS domain (UDI up to 64 kbit/s, multicall service, CS multimedia bearer, V.90 modem...)*
- *AMR is default voice codec*
- *Multimedia Messaging (non realtime picture, sound, video...)*
- *New ciphering algorithm F8 & F9. Management for the distribution has been agreed. Publication on the web: http://www.etsi.org/ (hit the "security algorithms & codes" link under "products and publications").*
- *Open I_{ub} (similar to A_{bis} - thanks to operator efforts)*
- *Open interface for Cell Broadcast Center /RNC (part of RAN)*

Open Issues 3G R99

- *Many open issues have been completed by March 2000.*
- *Completion expected for **June** 3GPP SA#8 (not complete list):*
  - ✓ *Handover / Cell selection,*
  - ✓ *Limited functionality (cell based) for Location Services,*
  - ✓ *Authentication Failure message report,*
  - ✓ *Common Packet Channel,*
  - ✓ *Radio Performance Spec's, Test Spec's for: BTS, Terminal Accoustic, UE for TDD Mode*
  - ✓ *Configuration Management, Fault Management.*
- ***Postponed to September**:*
  - ☞ *Charging Issues, UE Test Spec's for FDD, UICC Interface and Test Spec's.*

Issues moved out of R99

- *Some issues were **moved to R'00**:*
  - ☹ *SolSA ,*
  - ☹ *Advanced Cell Broadcast,*
  - ☹ *MAP Security,*
  - ☹ *Enhanced User Identity Confidentiality,*
  - ☹ *Tandem Free Operation,*
  - ☹ *Transcoder Free Operation,*
  - ☹ *Alternatives to AT commands.*

Specs under S3's responsibility

- *Security principles and objectives*
- *Security threats and requirements*
- *Security architecture*
- *Integration guidelines*
- *Cryptographic algorithm requirements*
- *Criteria for cryptographic algorithm design process*
- *Lawful interception requirements*
- *Lawful interception architecture*
- *Guide to 3G security*
- *Formal analysis of security mechanisms*