

A European Initiative for MST : The Component Technology Board Micro Systems Technologies Working Group



4th ESA Micro & Nano
Technologies Round Table

20-22 May 2003

ESTEC, Noordwijk

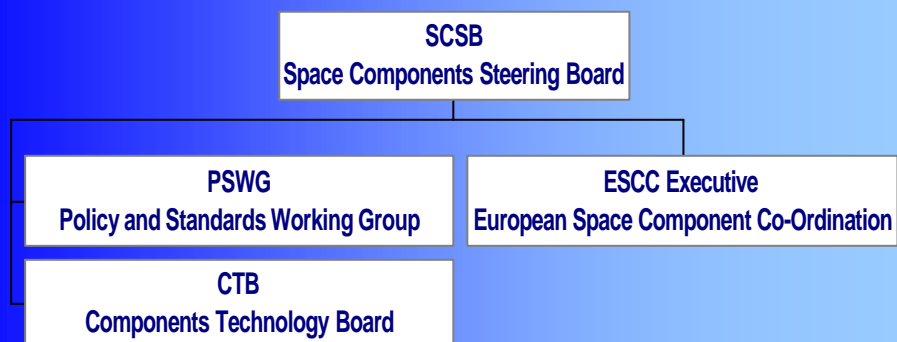
The Netherlands

CTB MST WG Members

Presented by Ralf De Marino ESA



Introduction: European Space Components Co-ordination - ESCC -Organisation Chart



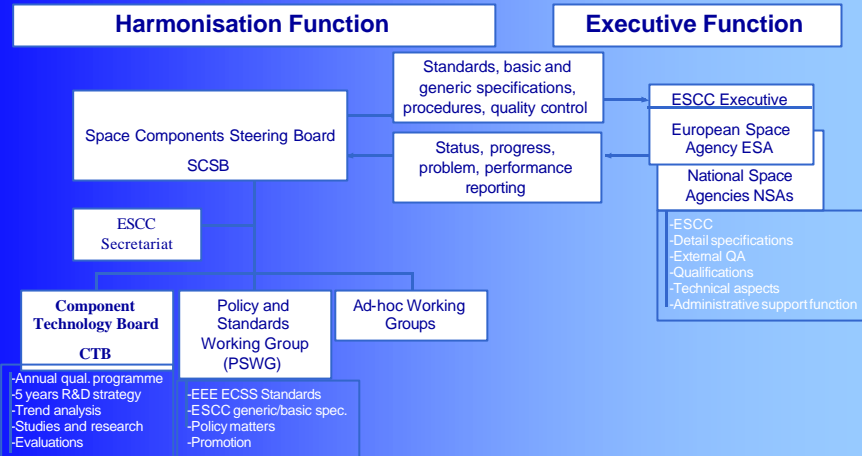
MEMBERS: ESA - NATIONAL SPACE AGENCIES (ASI, BNSC, CNES, DLR, ...)
EUROSPACE (PRIMES, USERS...) - COMPONENT MANUFACTURERS

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Introduction: The CTB & the European Space Components Co-ordination - ESCC -



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Introduction to CTB

Main Responsibilities

- The **CTB** is a body advising the SCSB on all technical issues and charged with the formulation of **strategic activities and work plans** for technology research and development in the area of European EEE space components.
- It supports the **harmonisation** of the collectively funded component research, development, evaluation, qualification, standardisation and quality assurance activities.

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Introduction to CTB Programme of Work

- One of the key tasks of the CTB is to propose a **programme of work** which addresses both the **short term needs** and the **mid-term objectives**.
- Priority is given to strategic needs.
- The detailed needs and activities are compiled in different dossiers.
- Dossiers are prepared and updated by specialist working group of CTB nominated experts lead by a dossier coordinator.
- The dossiers describe available and emerging technologies, market situation, space needs, recommendations and activity descriptions ...
- Dossiers are CTB working documents, distributed but **not in public domain**.

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Introduction to CTB: Working Groups & Technology Dossiers

| Working Group | Dossier coordinator | WG Members |
|--------------------------------|--|---|
| Silicon | Anastasia Pesce – ESA | Alcatel, Alenia, Astrium, ST, ATMEL, Tecnologica, ASI, CNES, DLR, ESA |
| Hybrids, MCM&HDP | Alberto Boetti – ESA | Alcatel, Alenia, Astrium, ATMEL, ASI, CNES, DLR, ESA |
| Passives | Michel Haury - ESA | Alcatel, Alenia, Astrium, ASI, CNES, DLR, ESA |
| RF and Microwaves | Jean-Luc Roux – CNES | Alcatel, Alenia, Astrium, TESAT, OMMIC, UMS, ASI, CNES, DLR,ESA |
| Photonics | Igor Zayer - ESA Karin Lundmark – ESA | Alcatel, Astrium, ATMEL, ASI, CNES, ESA |
| MST/MEMs – preparation in June | Laurent Marchand – ESA | Alcatel, Alenia, Astrium, ASI, BNSC, CNES, DLR, ESA, ST, ATMEL |

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MST CTB WG: Summary of the 1st Meeting

- 1st Meeting, ESA HQ Paris, 25 March 2003
- Participants: Alcatel Space, Astrium (Toulouse, Stevenhage, Munich, Velizy), ST Microelectronics, EADS LV

Excused CNES & Alenia

Teleconference preparation with BNSC and DLR

Main achievements:

- Official kick off of the WG
- New CTB MST WG **web page** on spacecomponents.org
- Agreement on **Generic & Specific ToRs**
- Objective: first draft MST dossier – June 2003

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MST CTB WG: Generic Terms of References

- Identify MST components considered to be of **strategic importance** for future space applications based on existing or anticipated user requirements
- In coordination with MST users define / propose the relevant **study, development, evaluation, and research activities**
- Establish a consolidated **multi-year strategic plan** for space MST devices (June 2003, to be periodically updated)
- **Assess** technologies / components, manufacturer capabilities, technology trends
- Estimate the necessary resources, funding, time scales and define **priorities** for the various activities
- Determine the necessary prerequisites and conditions to make these MST technologies/components available in line with project schedules

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MST CTB WG: Specific Objectives

- Guaranty **coordination** with eventual and possible users
- Promote ESA / NSAs AND Industry **co-funded activities**
- Interface with ESA Tech. **Transfer** and **Harmonisation** responsables
- Perform **mapping** of National/European MST capabilities
- Organisation of specific MST topics "**Info-days**" with universities, research centres and SMEs active in MST
- Act as an active data provider for the European Space Component Information Exchange System – **ESCIES** – (ESA MNT website under construction) and use **EUROCOMP NEWSLETTER** for promotion
- Considering the status of the MST devices and technologies in Europe, the WG should deal rapidly with the best approaches to :
 - Reliability demonstration and qualification, Specifications (Drafting)
 - Industrialisation (Transfer), Procurement (Mapping and procedures)

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MST CTB WG members and partners

- Francesco Svelto (ASI)
- John Davey (BNSC)
- Francis Presseccq (CNES)
- Klaus Steinberg (DLR)
- Sophie Barthe (Astrium Toulouse)
- Martin Sneilling & Arnaud Lecuyot (Astrium Stevenhage)
- Elisabetta Caramagno & Francesco Vitulli (Alenia Spazio Roma)
- Olivier Vendier (Alcatel Space Toulouse)
- Oudea Coumar EADS LV
- Jean Francois Vadrot (ST Microelectronics)
- Dominique De Saint Roman (ATMEL)
- Laurent Marchand (ESA) (coordinator)

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MST CTB WG: Conclusions

- Next major event: Preparation of the Strategic MST Dossier starting in June 2003
- Participation of additional members is still possible (subject to Approval), please contact the Working Group coordinator

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