



25 YEARS – 75 MEETINGS SASG

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Was it worth to spend $75 * 30 * 8 = 18,000$ manhours?

The background is a dark teal gradient. In the corners, there are decorative white line-art elements resembling circuit traces or neural network connections, with small circles at the end of the lines.

SASG: HISTORY

WHO IS THIS GUY?

WHAT DID WE DISCUSS IN ALL THOSE MEETINGS?

WHAT HAS CHANGED

...AND WHAT NOT

WHAT AN ARCHITECT REALLY DOES...

SASG: HISTORY

- Started as initiative from CFT (Centrum voor Fabricage Technieken), Philips
- CFT noticed that (production) equipment was becoming software heavy
- Variety of (operating) systems in use, little synergy, hardly reuse
- Many groups struggled with similar problems
- Initial name: Operating Systems Study Group
- Other CFT initiatives (mechatronics study group etc) have dried up
- Initially limited to Philips participants only
- Meeting room and lunch for 30 people can be arranged easily

WHO IS THIS GUY

- CFT contacted me if I would be interested in organizing SASG meetings
- First SASG meeting: September 1997, at Philips Electron Optics (then FEI and now Thermo Fisher) in Aachen
- Scope was soon widened: System Architecture Study Group
- Attracted interest from other hi-tech companies: first meeting at Océ Venlo in June 1999
- Gentlemen's agreement: material and discussions during the meetings are confidential
- Medical does not make steppers, FEI does not make MRIs, ASML does not make electron microscopes so we can have open discussions

WHAT DID WE DISCUSS IN ALL THOSE MEETINGS?

- Configuration Management
- Future proof architectures, product line architecture, architecture evaluation, architecture renovation, reliability in architecture, architecture metrics, past and future of system architecture
- Heterogenous systems, hybrid systems
- Modelling, UML, model-based systems, model based code generation
- Safety, security, fault tolerance
- Data intensive systems, who owns the data
- Motion control, mechatronics
- Machine learning, cloud

WHAT HAS CHANGED?

- Unlimited availability of processing power, memory and communication bandwidth
- Variety of environments and programming languages
- Security is a vital part of any system
- Availability of cloud computing and -storage
- Hybrid environments including mobile
- Systems are too large to be understood by a few architects

WHAT HAS NOT CHANGED?

- Speed of technological change: staying up-to-date
- Fighting the complexity: defining interfaces
- Making proper selection from available and future technologies
- Interdisciplinary work essential as ever
- Managing ever increasing code bases

WHAT AN ARCHITECT DOES...

SASG Meeting February 2002 (architecture, communication and education)

Traditional architect: creating and organizing space (gravity is the problem)

Systems architect: creating and maintaining freedom (complexity is the problem)

- determining the boundaries of the system

- defining the views to consider

Note: domain knowledge is easier to acquire or to find than architectural skills

The background is a solid teal color with a subtle gradient. In the four corners, there are decorative white line-art patterns resembling circuit traces or data paths, with small circles at the end of the lines.

THANK YOU!

See you at the 100th SASG meeting in February 2031