Austrian Participation in SESAR

Frequentis SESAR Head Negotiator: Johannes ‘Gio’ Prinz

FREQUENTIS

Frequentis AG

Communication & Information Solutions by FREQUENTIS for a Safer World!

We build highly reliable communication and information systems for safety-of-life solutions in …

Air Traffic Management

and

Public Safety & Transport

Frequentis AG in ATM

Frequentis is a **globally influential innovator** in **ATM. Frequentis solutions have set industry standards!**

- first full digital voice switching system in ATM
- User Interface Focus – Touch Operation
- first network enabled communication service infrastructure
- AIS Database – EAD
- SWIM

Frequentis is a small business compared to the international competition!

Motivation from the very beginning

- Frequentis regards SESAR the only currently existing mechanism promising to generate sufficient momentum to kick-off a modernisation process in European ATM
- Frequentis regards itself as an influential organisation who wants to shape and leave traces in the future European ATM „system“
- 3 main areas of interest and contribution
  - Communications – enforcing its leading position
  - Information Management – enlarging existing competence
  - Integrated Operator Position – setting new standards

Frequentis AG in SESAR

Frequentis was not part of SESAR Definition Phase!*

Frequentis is a SESAR MEMBER CANDIDATE for the SESAR Joint Undertaking (SESAR Development Phase) together with

- Airborne Industry: Alenia Marconi, Airbus, Honeywell,
- ANSP: AENA, ENAV, DSNA, DFS, NORACOM (Consortium lead by LFV comprising Scandinavian ANSP and AUSTROCONTROL), NATS,
- Ground Industry: Frequentis, INDRA, NATMIG (Consortium comprising Saab and other Nordic Industry), SELEX, Thales,
- Airport: SEAC (Consortium lead by Fraport comprising European Airports)
- Eurocontrol (founding member and member candidate)

*) practically excluded

Strategic Approach of Frequentis

STRATEGIC IMPACT

WP10

iCWP

Representing information is equally key to decision making as the existence of information as such.
Existing Solutions: TAS, CDM, EFS, FCUI

integrated TWR

WP12

•Towers represent small Control Centers with most decision making processes that apply also to larger installations. In addition, a much more collaborative approach is required to extend to Airport as a whole.
•Existing Solutions: TAS, workflow

WP5
WP6

WP8

WPB

(SW)IM

•Decisions require information that is not local to the decision maker but rather originates from various sources at different locations.
•It is not the transport of data (sharing) alone but the qualified information provisioning. Advanced Message Handling technology allows to converge the distribution of Aeronautical but also MET and SUR etc. data
•Existing Solutions: AIM, (A)MHS

WP14

WP15

CNS

IP based Solution allows to use backbone systems like PENS to carry operational voice. Radio technology allows for not only datalink but may also indicate new approaches to ADS-B II or even navigation.
Existing Solutions: L-DACS1(B-AMC, B-VHF), VoIP

WP16

WP13

ADDED VALUE

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Frequentis Major Threads (1)

Communications

- Future A/G Communication supporting L-DACS$_{12}$
- Satellite Coms
- Ground System

Information Management - SWIM

- Information Element EAD – European AIS Database
- Technical Lead SWIM-SUIT FP6 Project
- Data Modelling for AIS, Environmental et.al.
- Validation Elements for Interface Definitions
- Project Lead for 3 projects

Frequentis Major Threads (2)

INTEGRATION

Integrated Controller Working Position

- Novel Concept for User Interface Design and Structure
- Theme Lead both in Tower and Enroute/Approach WPs
- Project Lead

Integrated Tower

- Service Concept for TAS (Tower and Airport System)
- Project Leads for 2 projects

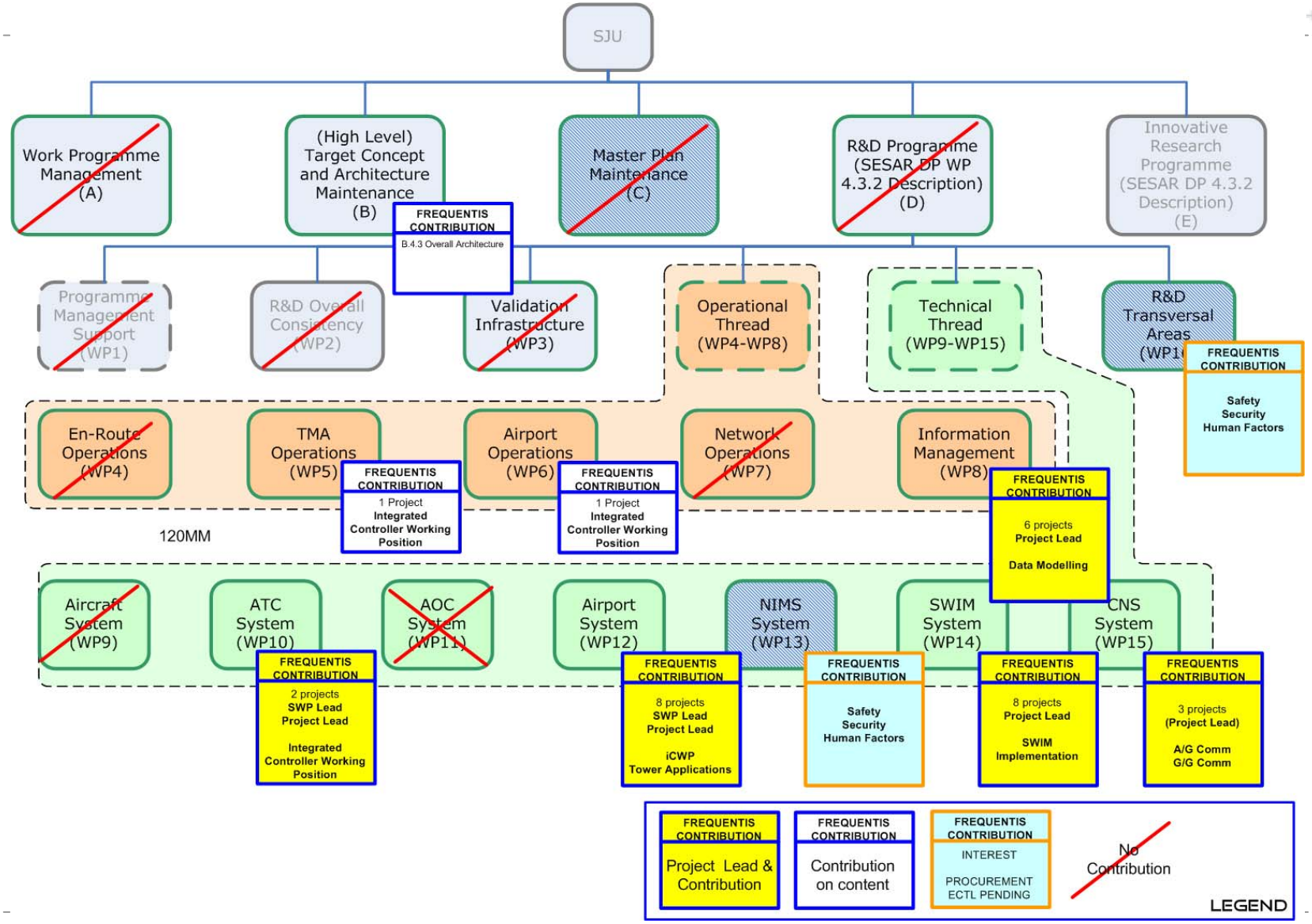
Frequentis Major Threads (3)

Cross Cutting Domains

- Safety
- Security
- Human Factors (for Integration Issues)

Overall SES System Architecture

Frequentis Contribution



Frequentis AG in SESAR

Envisaged Contribution in

30 Projects (out of ~250)

5(+) Project leads

2 sWP Leads combining integrated Controller Working Position (iCWP) activities in WP 10 and WP 12

Contribution represents 1% of the overall volume.

Subcontracts are refunded with 50%, meaning that the subcontracting partner has to co-finance the subcontractor with the remaining 50%. This substantially limits the room for subcontracts in particular for small orgs!

Austrocontrol Contribution

- main areas of interest and contribution
  - Weather – enforcing current position
  - Trajectory Management – international co-operations
  - Static Data – enforcing international co-operations

→ Weather on Airports (WP6, WP12)

- Operation in Adverse weather conditions

→ Static data management and SWIM (WP8, WP10)

- increase of data quality in the whole data chain
- development of airport operators ATM information management

→ Data Link -> together with Prof. Rokitansky (WP10)

- enhanced data link features

→ Trajectory Management - Queue Management - Separation Management (WP5, WP10)

Current Status (as to the best possible knowledge)

- 26.3. SESAR JU Admin Board approved executive proposal
  - Executive Proposal is the result of the decisions of the SJU on the proposals of the member candidates
- Single European Sky Commitee endorsed proposal
- Eurocontrol Provisonal Council did not accept
  - The PNC is supposed to decide on the matter in beginning of May
- Membership Agreements about to be signed in the course of May
- Initiation Phase about to start immediately after the Membership agreements have been signed

COMMUNICATION AND INFORMATION SOLUTIONS FOR A SAFER WORLD