CANSO Global ATM Operations Conference

MADRID | SPAIN | 8-9 MARCH

Smart tower evolution – digital enhancement or remote operations?

Markus Klopf
FREQUENTIS AG
Strategic Marketing Manager

Comprehensive experience in Remote Towers

2010	2011	2012	2013	2014	2015	2016	2017
Early concept definition	Technology research	Solution definition	Operational validation Zeltweg, Dresden, Middle East		DFS contract	DFS rollout	SESAR 2020 Multi Airport

Research & development → Intensive field testing → Customer rollout

70 years

of experience in mission critical ATM applications – product integration…

60,000+

MET police cameras

Virtualisation

Started working on ATC video and Remote Tower systems over 7 years ago.

Diversity

After a period of research, the solution was developed and tested at several airports in Germany, Austria and the Middle East.

Installations in Germany, New Zealand, Austria, Jersey and Iceland

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Controller driven process for CWP design and HMI essential to get acceptance

Highly accepted working position concept, based on

- 7 DFS validations
- Human factor studies

- Flexible working position concept
- Optimized interaction concepts
- Framerate minimum 25 fps
- Mini panorama
- PTZ map

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HMI will change many times – ‘bigger is not necessarily better’

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Flexibility is key and demands a flexible solution approach

From low-traffic regional airports to enhancing high-performance towers

	Vision enhancement	Basic RVT	Advanced RVT	Large Airport
	• Vienna	• Iceland	• DFS	• Jersey
Drivers	Enhanced viewing capability from existing control tower, coverage of critical areas	Focus on cost efficient operation Trade off in service quality	Focus on cost efficient operation and service quality	Cost efficiency (avoid multiple towers) while maintaining throughput; Contingency

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It’s about integration.

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Agility vs. procurement

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