



2019
World ATM Congress



SESAR
walking
tours



2018 Results



IMPROVED
SEPARATION PROVISION

NATS

ADVANCED
SEPARATION MANAGEMENT

CARIO Daniel (DSNA)
???? (NATS)





PROJECT OVERVIEW



Advanced air traffic services

Controller tools and team organisation for the provision of separation in air traffic management



POLSKA AGENCJA ŻEGLUGI POWIETRZNEJ
POLISH AIR NAVIGATION SERVICES AGENCY



SESAR 2020 Project





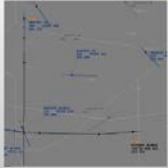


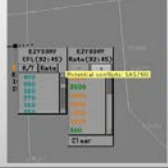

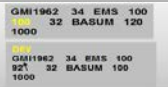

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IMPROVED SEPARATION PROVISION IN TMA & EN ROUTE WITH ENHANCED CONFLICT DETECTION AND RESOLUTION TOOLS

→ TECHNICAL & OPERATIONAL FEASIBILITY

VALIDATED

- ⊙ Successful integration of tools and services into different ATM systems
- ⊙ New resolution aids validated (what-if, what-else, time validity,...)

ATCAS	ICAS	TopSky look-alike	functionality
			ECS – Executive Conflict Search
			What-else probing (conflict resolution support) – example CFL and rates
			MONA – Monitoring Aids: CFL deviation MONA – Monitoring Aids: vertical rate deviation

Benefits

ATCO Situation Awareness ++

Positive Impact on ATCO Workload

Mental Model ++

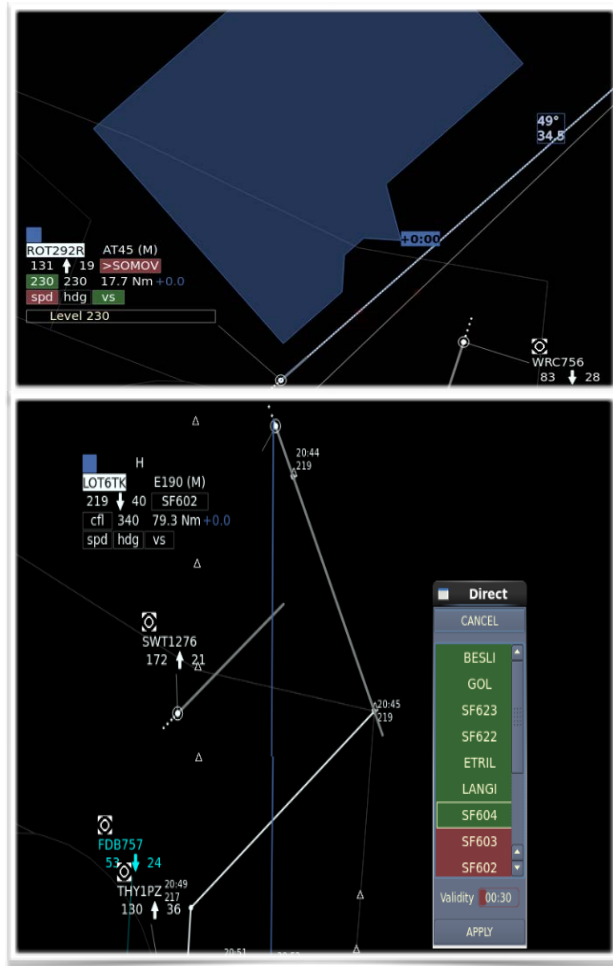
IMPROVED SEPARATION PROVISION IN TMA & EN ROUTE WITH ENHANCED CONFLICT DETECTION AND RESOLUTION TOOLS

→ TECHNICAL & OPERATIONAL
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Successful development of enhanced
features for conflict detection and
resolution within different ATM systems

**'What-else'
availability
at a glance**



IMPROVED SEPARATION PROVISION IN TMA & EN ROUTE WITH ENHANCED CONFLICT DETECTION AND RESOLUTION TOOLS

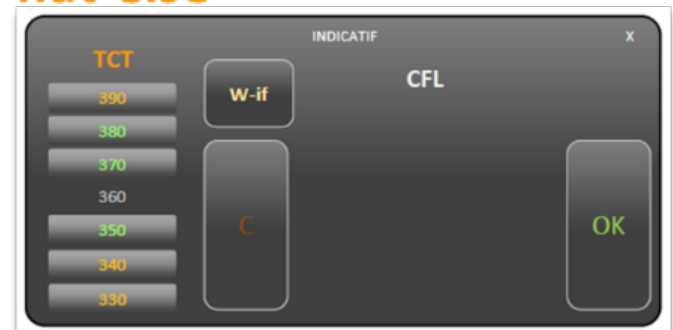
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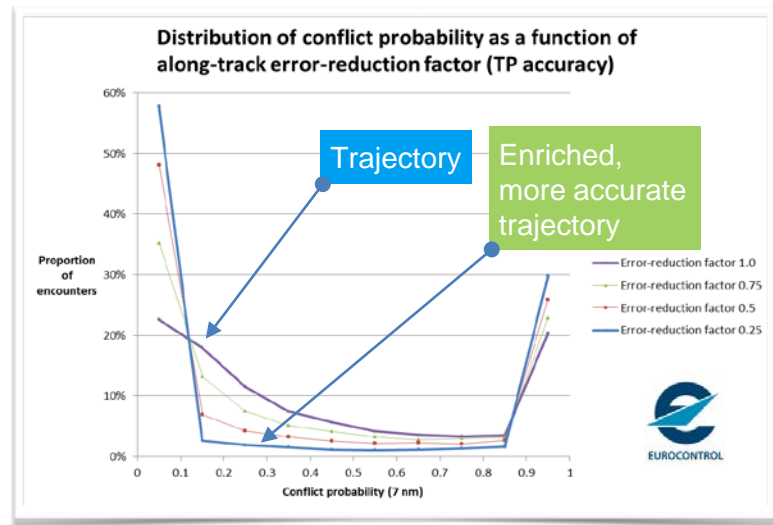
**'What-else'
on TCT**



IMPROVED SEPARATION PROVISION IN TMA & EN ROUTE WITH ENHANCED CONFLICT DETECTION AND RESOLUTION TOOLS

→ ANOTHER METHODOLOGY: ENRICHED TRAJECTORY WITH DATA ON-BOARD

Demonstration on stand #957



The conflict is better detected in a safer way

Benefits

ATCO Situation Awareness ++

Positive Impact on ATCO Workload

Mental Model ++

ADVANCED SEPARATION MANAGEMENT

→ ???

To be completed by NATS

Benefits

?????

????

?????

ADVANCED SEPARATION MANAGEMENT

→ ???

To be completed by NATS

Benefits



- ?????
- ????
- ?????



IMPROVED SEPARATION
PROVISION:
New functions to better
detect conflicts and
to solve them

ADVANCED SEPARATION
MANAGEMENT:
...(to be completed)



CAPACITY improved
in TMA & En-Route



COST EFFICIENCY optimised
for air navigation services



SAFETY maintained





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