



DATS Workshop on Digital Air Traffic Services:
Workload and Safety Assessment
February 11-12, 2021
Linköping University



DATS 2021 – setting the scene

11-12 february 2021

Billy Josefsson , Manager Automation & Human Performance,
LFV Research & Digitalization

NORRKÖPING SWEDEN 11–12TH FEBRUARY 2021
DIGITAL AIR TRAFFIC SERVICES

Workshop

on Safety and Workload



AMPLIFY TEAMWORK WITH AUTOMATION



SAAB

2019



2020



2021



Jan Walther	j.walther@airsight.de	Airsight
Christian Kern	christian.kern@austrocontrol.at	Austro Control
Damar Litschauer	damar.litschauer@austrocontrol.at	Austro Control
Yves Pezzetta	yves.pezzetta@austrocontrol.at	Austro Control
Daniel Schaad	daniel.schaad@austrocontrol.at	Austro Control
Martin Steinheimer	martin.steinheimer@austrocontrol.at	Austro Control
Nathan Vink	nathan.vink@austrocontrol.at	Austro Control
Alice Farrell	A.farrell@cranfield.ac.uk	Cranfield University
Shane Kenny	S.Kenny@cranfield.ac.uk	Cranfield University
Craig Kerr	Craig-Martin.Kerr@cranfield.ac.uk	Cranfield University
Wen-Chin Li	wenchin.li@cranfield.ac.uk	Cranfield University
Jingzi Zhang	Jingyi.Zhang2@cranfield.ac.uk	Cranfield University
Maik Friedricch	Maik.Friedrich@dlr.de	DLR
Jörn Jakobi	joern.jakobi@dlr.de	DLR
Gianluca Valente	Gianluca.Valente@dans.gov.ae	DUBAI ANSP
Teele Kohv	Teele.Kohv@eans.ee	EANS, Estonia
Martin Tärn	martin.tarn@eans.ee	EANS, Estonia
Mathias Tammaru	mathias.tammaru@eans.ee	EANS, Estonia
Mati Tarlap	mati.tarlap@eans.ee	EANS, Estonia

Gianluca di Flumeri	gianluca.diflumeri@uniroma1.it	Sapienza University of Rome
Harald Kolrep	kolrep@human-factors.de	HFC Human-Factors-Consult GmbH
Rodney Leitner	leitner@human-factors-consult.de	HFC Human-Factors-Consult GmbH
Roberto Sosa	rsosa@icao.int	ICAO
Ivelina Ivanova	idivanova33@yahoo.com	Inventya ltd
Supathihida Boonsong	supathida.boonsong@lfv.se	LFV
Mikael Henriksson	mikael.henriksson@digital-tower.se	Digital Tower Consulting AB/LFV
Kenneth Hammarberg	kenneth.hammarberg@lfv.se	LFV
Billy Josefsson	billy.josefsson@lfv.se	LFV
Lothar Meyer	lothar.meyer@lfv.se	LFV
Maximilian Peukert	maximilian.peukert@lfv.se	LFV
Kaija Sterner	kaija.sterner@lfv.se	LFV
Åsa Svensson	asa.e.svensson@lfv.se	LFV
Henrik Hardell	henrik.hardell@liu.se	LiU
Eulalia Hernandez Romero	eulalia.hernandez.romero@liu.se	LiU

Anastasia Lemetti	anastasis.lemetti@liu.se	LiU
Jonas Lundberg	jonas.lundberg@liu.se	LiU
Magnus Nylin	magnus.nylin@liu.se	LiU
Tatiana Polishchuk	tatiana.polishchuk@liu.se	LiU
Valentin Polishchuk	valentin.polishchuk@liu.se	LiU
Christiane Schmidt	christiane.schmidt@liu.se	LiU
Leonid Sedov	leonid.sedov@liu.se	LiU
Lucie Smetanova	luca.smetanova@gmail.com	LiU
Elmira Zohrevandi	elmira.zohrevandi@liu.se	LiU
Victor van Elburg	v.s.a.vanelburg@lvnl.nl	LVNL / ATC the Netherlands
Michiel Feenstra	Michiel.Feenstra@lvnl.nl	LVNL / ATC the Netherlands
Fred Olislagers	fred.olislagers@gmail.com	LVNL / ATC the Netherlands
Richard Winterberg	richard.winterberg@lvnl.nl	LVNL / ATC the Netherlands
Parimal Kopardekar	parimal.h.kopardekar@nasa.gov	NASA
Eamon Wylie	eamonn.wylie@atcos.co.uk	NATS & Trade Union
Jürgen Teutsch	Juergen.Teutsch@nlr.nl	NLR
Giovanni Pignoni	giovanpi@stud.ntnu.no giovanni.pignoni@ntnu.no	Norwegian University of Science and Technology
Sameer Alam	sameeralam@ntu.edu.sg	NTU
Imen Dhief	imen.dhief@ntu.edu.sg	NTU
Yixiang Lim	yixiang.lim@ntu.edu.sg	NTU
Zhenna Lu	zhenna.lu@ntu.edu.sg	NTU
Thai Van Phat	thai0009@e.ntu.edu.sg	NTU

Dalia Enkiene	Enkiene.D@ans.lt	Oro navigacija
Laimis Gogelis	gogelis.l@ans.lt	Oro navigacija
Loreta Kasparaite	kasparaite.l@ans.lt	Oro navigacija
Magnus Lindegren	magnus.lindegren@saabgroup.com	SAAB
Bengt-Arne Skoog	bengt-arne.skoog@saabgroup.com	SAAB
Nimrod Lilith	nimrod.lilith@ntu.edu.sg	SAAB-NTU Joint Lab
Niclas Gustavsson	niclas.gustavsson@saabgroup.com	SDATS
Ali Cheitau	acheaitou@sharjah.ac.ae	Sharjah University
Anders Johannesson	anders.johannesson@sjofartsverket.se	Sjöfartsverket
Filip Meert	Filip_Meert@ext.skeyes.be	SKEYES
Nina Becker	nina.becker@skyguide.ch	skyguide
Giuseppe Dell Oro	giuseppe.delloro@skyguide.ch	skyguide
Malcolm Lundgren	malcolm.lundgren@trafikverket.se	Trafikverket
Laura Galuppo	laura.galuppo@unicatt.it	Università Cattolica del S. Cuore
Eliana Greco	eliana.greco@unicatt.it	Università Cattolica del S. Cuore
Benedetta Nicoli	benedetta.nicoli@unicatt.it	Università Cattolica del S. Cuore
Imad Alsyouf	ialsyouf@sharjah.ac.ae	University of Sharjah (UoS)
Maria Lindqvist	Maria.Lindqvist.9382@student.uu.se	Uppsala University
Gauthier Sturtzer	sturtzer@usac-cgt.org	USAC-CGT trade union
Jan Andersson	jan.andersson@vti.se	VTI
Gunilla Björklund	gunilla.bjorklund@vti.se	VTI

Day 1

13:00 - Welcome notes, round table, introduction (Billy Josefsson, LFV)

13:30 - Tatiana Polishchuk and Christiane Schmidt, LiU: CAPMOD Project Results and Future Research

14:00 - Jörn Jakobi, DLR: Multiple Remote Tower – Boon or Bane?

14:30 - Coffee break

14:45 - Mikael Henriksson: Remote operations challenges-experience gained, expected challenges and possible mitigations

15:15 - Maik Friedrich, DLR: An eye catcher in the ATC domain: Influence of Multiple Remote Tower Operations on distribution of eye movements

15:45 - Lothar Meyer, Maximilian Peukert, LFV: An evaluation of workload and fatigue methods based on experience from TWR field studies

16:15 - Coffee break

16:30 - Wen-Chin Li, Cranfield University: Safety Assessment of Applying Digital Tower for Apron Control on International Airport

17:00 - Keynote Gianluca di Flumeri, Sapienza University of Rome: Decoding the ATCO's brain for augmented Human-Machine Interaction.

09:00 - Keynote Parimal Kopardekar (PK), Director of NASA Aeronautics Research Institute (NARI): Future Airspace Management

Day 2

10:00 - Coffee break

10:15 - Niclas Gustavsson SAAB: Digitalisation in “Saab r-Twr” - a centre of Towers enabling services for all airspace users

10:45 - Anders Johannesson, Sjöfartsverket: Navigational Support from Ashore – Maritime Pilotage

11:15 - Eamon Wylie, ITF: Safe Skies: ITF approach to Remote tower operations 11:45 - Discussions, take-home messages

13:00 - Closing notes

- Time keeping = key!
- Write questions in the Chat, Chair will let you talk = feedback is key!
- Be to the point with your question / remark
- Save discussions for the cofferoom and evening

Housekeeping

Virtual Cofferoom open Thursday 13:30 -1700

Virtual Cofferoom open Friday 10:15 -12:15

See you there! Perfect for coordination, networking and relax

Our hosts in the cofferoom will be at your service, welcome!

Virtual Social Event today 18:15 – 2015

Every one is invited (own cost), the ultimate networking and further detailed discussion about the future and everything. Make some new friends!

Please consult the flyer for location (Zoom links)



What's in the Research pipe for DATS, 3,4,5-10 yrs ahead

- ✓ Labelinteraction (less or no need for e strip)
- ✓ Workload monitoring
- ✓ Automatic Speech Recognition
- ✓ New sensors
- ✓ Augmented Reality
- ✓ Attention Guidance supported by AI
- ✓ Automation support for training and verification of competence
- ✓ Resilient Strategies for multiple information sources (RE5 → X10 → hybrid i/f)





...hit the deck running...

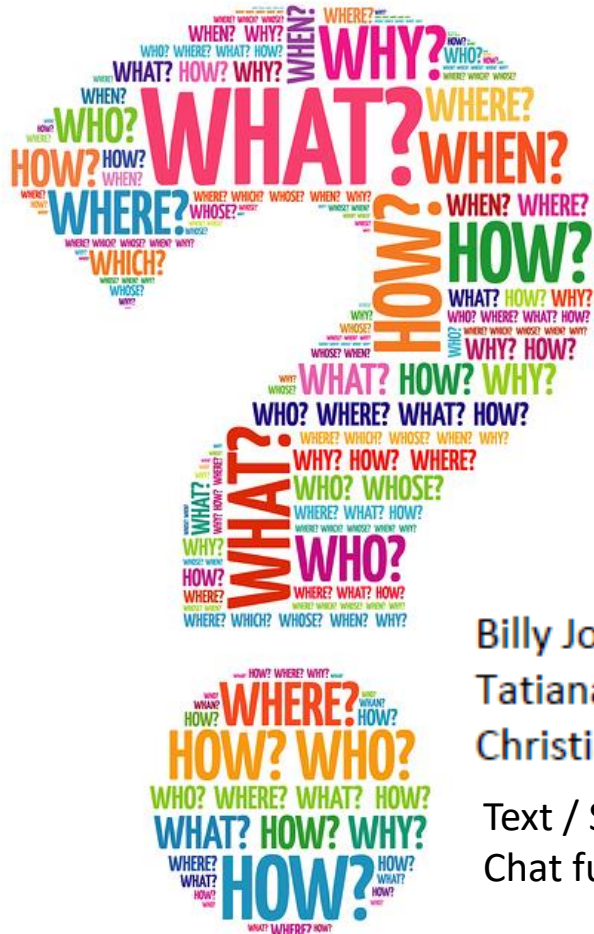
-technology

-services

-learning

-exchange

-collaboration; industry – users - academy



Billy Josefsson, billy.josefsson@lfv.se

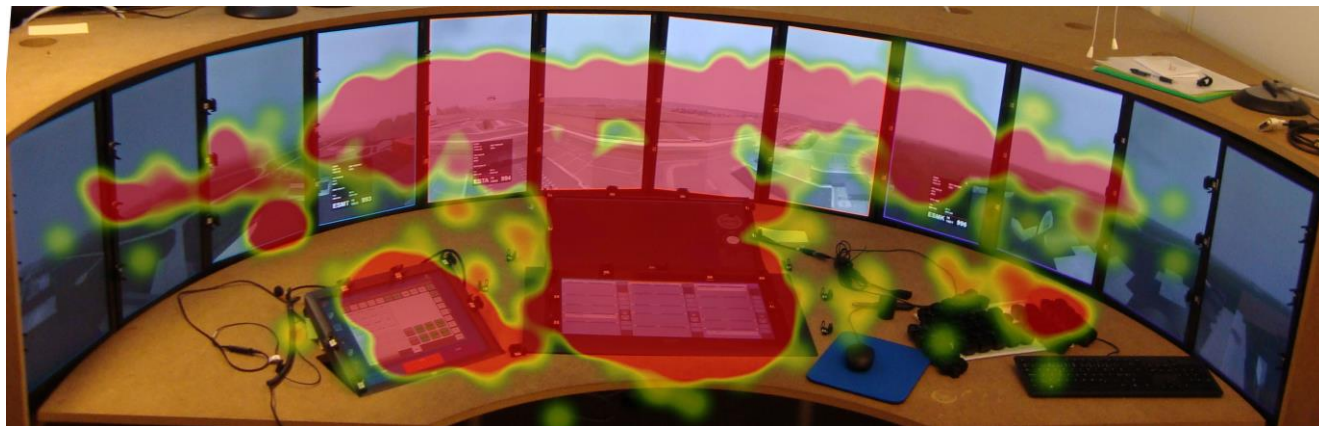
Tatiana Polishchuk, tatiana.polishchuk@liu.se

Christiane Schmidt, christiane.schmidt@liu.se

Text / SMS +46 708 192331 (Billy)

Chat function







DATS Workshop on Digital Air Traffic Services:
Workload and Safety Assessment
February 11-12, 2021
Linköping University

