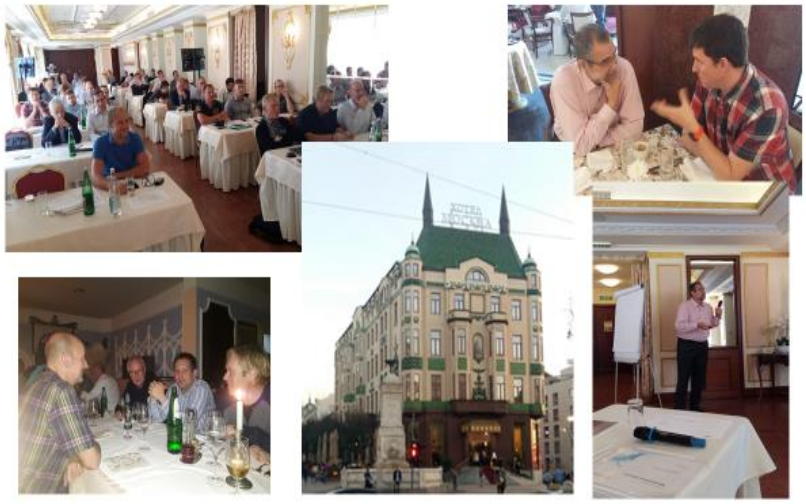
INFORMASJON FRA ATM NORGE

Nyhetsbrev oktober 2017

Nytt fra Indra Navia:

Indra Navia Navaids Workshop for eighth time



This time, the Workshop was in Belgrade with more than 50 participants from Europe and Canada. The theme was “Navaids maintenance today and tomorrow”.

The two-day event contained 25 presentations from Indra Navia, ANSPs and ENAC. These were covering themes like the coming changes in ICAO and European standards, cyber security, remote towers and centralized maintenance concepts. The problem how to replace navaids-competent staff with the more IT-focused generation was also discussed. The airport might then be more dependent on qualified support from the suppliers and centralized ANSP experts. Another topic was the use of drones for Flight Inspection instead of aircraft; this method can considerably reduce the cost in the future if and when approved.

It was also demonstrations of the most relevant software tools for analysing the effect of airport and its surroundings on navaids. Such tools minimize the risk with airport extensions and erecting new buildings.

The audience all agreed that the conventional landing system ILS will remain the overall dominating concept also for the next ten years.

Before the always very friendly dinner, it was time for a visit to the Nikola Tesla Museum. The Serbian with the alternating current inventions, not a museum for the car…

Etter å ha utviklet SCAT-1 for norske forhold, har Indra Navia også blitt ledende innenfor utviklingen av GBAS (Ground Based Augmentation System). I en artikkel i **Jane's Airport Review** nylig, får Indra Navia bred omtale.
Hele artikkelen kan leses på Indra Navias hjemmeside**.**

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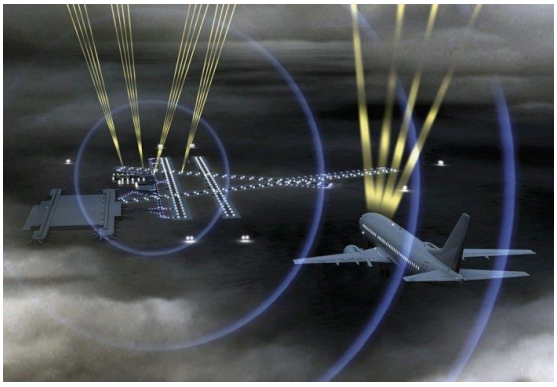
New standards draw closer for GBAS

GAST-D standards are to be approved by late 2018, as a leap ahead in capability compared with existing certified GBAS ground stations. Jenny Beechener reports.

Progress towards development of a satellite-based landing system that can match the performance of the safest and most precise Instrument Landing Systems (ILS) took a step forward in December 2016, with the finalisation by ICAO of draft Standards and Recommended Practices (SARPS) for an advanced Ground Based Augmentation System (GBAS).
Industry stakeholders are due to approve GBAS Approach Service Type D (GAST-D) standards by the end of 2018, followed by type certification by 2020.



Depiction of the Honeywell SmartPath GBAS. (Honeywell)

Existing certified GBAS ground stations and airborne receivers are limited to approach guidance down to 200 ft decision height, or Cat I minima. Meanwhile, industry is developing ground-based and airborne receivers to enable precision approach procedures down to the runway threshold, or Cat II/III, thereby bringing the benefits of GBAS operations to airports in all weather.

GBAS Cat I, also known as GBAS Approach Service Type C (GAST-C) is already operational in many parts of the world. SLS-4000 SmartPath from Honeywell was certified by the US Federal Aviation Administration (FAA) for public use at Houston George Bush Intercontinental (2013) and Newark Liberty International (2012), and the Port Authority of New York and New Jersey (PANYNJ) plans to introduce the technology at other New York airports including JFK and La Guardia. As recently as September 2017, Seattle-Tacoma International secured approval to initiate a GBAS project (it was one of the early test sites more than a decade ago). SmartPath is also certified for revenue operations at airports in Germany (Bremen and Frankfurt), Australia (Sydney and Melbourne), Spain (Malaga), and Switzerland (Zurich).

GAST-D

Continuing the work begun in the first phase of the European SESAR modernisation programme, SESAR 2020 aims to verify that a GAST-D ground station can operate and provide the signal integrity to deliver the performance necessary for Cat II/III minima in an airport environment. **Indra Navia** is leading the GBAS technical package in SESAR, and it is the only manufacturer to provide multiple transmit antennas with its GAST-D prototype to cover large complex airports.
"We believe the big market segment will be Cat III and we are committed to pursuing this," **Hugo Moen**, GBAS business development manager, remarked to Jane's . "We are going directly for a GAST-D system that will cover all aspects of operation from Cat I to Cat II/III."
This means that **Indra Navia** is not spending unnecessary time on Cat I development, or putting at short-term risk its position as a leading manufacturer of ILS equipment. Indra's experience includes implementation of the first certified Special Category I (SCAT-1) local area precision approach system based on satellite signals implemented across Norway in the 2000s, and still in operation.

GBAS antenna at Frankfurt Airport. DFS)

SESAR GAST-D research addresses several areas. The main challenge is ionospheric anomalies, which could impact signal integrity. As satellite signal availability increases with the launch of more satellites, and multifrequency comes into play with new constellations, airborne and ground monitoring systems are using new algorithms to compensate for ionospheric challenges. New constellations in Europe (Galileo) and China (Beidou), and the latest US Global Positioning System (GPS) satellites all provide multifrequency signals.

An Indra ground station in the Canary Islands is part of tests led by Spanish ANSP Enaire into ionospheric threats for low latitude regions. The goal is to have viable ionospheric monitoring algorithms that can maintain signal integrity when the first phase of SESAR 2020 is due to conclude in 2019.

An Indra GAST-D ground station has been supporting tests at Frankfurt Airport since 2013, and a separate SESAR 2020 technical activity is focused on validating the infrastructure to support Cat II/III operations. The test station operates with VHF Data Broadcast (VDB) stations that relay essential information including signal corrections, integrity information, as well as the approach paths, to the aircraft.

Indra GBAS product manager **Linda Lavik** said the focus of activities at Frankfurt is to validate GBAS GAST-D operation in the environment of a large airport with dense traffic and a complex layout. “Typically, one VDB is adequate for a small airport. The goal is to manage with no more than two. We are rationalising the infrastructure to better support complex airports and make it more cost-effective.” Meanwhile, project partner DFS (air navigation service provider for Germany) is looking at operational aspects such as the provision of equipment and procedures necessary to operate and maintain a GAST-D ground station.

A third GAST-D Indra prototype is operational at Oslo Gardermoen Airport in Norway, where it is part of a SESAR operational work package. Here, the aim is to improve the efficiency of navigation in the terminal area up until the capture of the approach, with particular focus on ATC procedures and airspace design.

Nytt fra SINTEF / SESAR:

Representanter for Administrative Board under styremøte forrige uke.

SESAR feirer 10 årsjubileum i høst. Norske medlemmer i SESAR er Avinor, Avinor FS, Indra Navia og SINTEF.

This year, the SESAR Joint Undertaking (SESAR JU) celebrates ten years of defining and developing solutions to modernise Europe’s air traffic management. On 19 October, the anniversary year was marked by the SESAR JU and its members on the occasion of the partnership’s Administrative Board meeting.

Marian-Jean Marinescu, Member of the European Parliament, congratulated the SESAR JU and it members, noting that SESAR was a true European success story, paying dividends in terms of benefits not just to the economy but also to citizens. He noted the significant progress

made by the partnership in delivering quality solutions and the need to continue to work closely with the Deployment Manager to ensure their swift deployment.

Henrik Hololei, Director General of DG MOVE and Chair of the SESAR JU Administrative, expressed his pride in the partnership, which was very much a pioneer in terms of public-private collaboration, not just in Europe but worldwide. Referring to the 63 solutions delivered by the SESAR JU, he remarked that, "we have collectively achieved what was not possible individually".

The modernisation of air traffic management is a team game, agreed Frank Brenner, Director General of Eurocontrol and Vice-Chair of the SESAR JU Administration Board. He encouraged the membership to forge ahead with SESAR 2020 with the same spirit of partnership to deliver even greater results in the years to come.

Mer om jubileet og SESAR kan leses her.

News from Momberger Airport Information - www.mombergerairport.info

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The UK's NATS is recommending that the UK Government should reclaim economic control of the ANSP as a consequence of the nation's decision to exit the European Union. NATS has pointed out that the UK had been responsible for economic regulation until 2015 so that a return to that would therefore be "straightforward". Under the Single European Sky (SES), a performance scheme sets targets in the key areas of safety, environment, airspace capacity, and cost efficiency through the adoption of European Union-wide targets and the approval of Functional Airspace Blocks (FAB) performance plans. Performance plans also contain incentive mechanisms, including the sharing of some financial risks between ANSPs and airspace users. The second reference period (RP2), which runs from 2015 to 2019, is coming to a close and EU providers are now preparing for new targets as part of a third reference period (RP3).
NATS said that the UK is required under national transport legislation to guarantee its 'financeability'. "Our unique private sector status means that without a UK vote [at EU level], NATS' financeability may not be guaranteed inside the European performance scheme because of its 'one size fits all' approach," NATS said. "NATS has helped shape the development of the Single European Sky, and our involvement is valued across Europe. This includes improving ATM performance in safety, capacity, cost efficiency and environmental measures," it said, adding that it will continue to have "every incentive" to align with SES regulations regarding safety and interoperability. The lack of any certainty regarding the UK's intentions with respect to the European single aviation market and regulation is also generating significant uncertainty for the Irish ANSP, IAA, which partners with NATS in the UK/Irish FAB. #1058.ATC1

Nearly 200 commercial inbound flights handled by the French ANSP, DSNA, to Paris Orly Airport (ORY) have successfully tested the xStream procedure of extending the arrival management horizon up to 250 nm. The trials were conducted in August 2017 during maintenance work on the airport's North runway and showed promising first results in terms of flight efficiency. xStream (cross-border SESAR trials for enhanced arrival management) is a project led by DSNA and its partners, COOPANS, DFS, EUROCONTROL, NATS, skyguide, SEAC (SESAR European Airports Consortium), AT-One, and **Indra**. xStream is one of several large-scale demonstration activities of SESAR 2020, aiming at delivering ready-to-be operational, innovative solutions.

The xStream project builds on the award winning SESAR demonstration project ‘iStream’, which illustrated the ATFCM (Air Traffic Flow and Capacity Management) benefits of using target time of arrival (TTA) at congested airports. With extended arrival management (E-AMAN), the flow manager is able to make an early plan of what the arrival sequence will be, and controllers manage arrival delays tactically during the cruising phase of the flight. With greater anticipation and predictability on the arrival sequence, the objective of E-AMAN is to enable delay absorption earlier in the flight, at higher altitude, thereby improving arrivals fuel efficiency. The E-AMAN is a key component of the first package of functionalities of the European regulation called Pilot Common Project (PCP). The xStream project now aims at further enhancing target time, ATFCM and E-AMAN queue management processes.
The collaborative E-AMAN process was implemented between Orly Approach, Paris, and Bordeaux Area Control Centres (ACC), with the objective of smoothing the morning arrival traffic peak and mitigating controller’s workload in the TMA by reducing vectoring and holding. Between 25 July and 28 August 2017, DSNA controlled more than 10,000 flights per day on average, with almost 200 inbound flights to ORY being given speed reduction requests from the North of Bordeaux and Lyon. First results showed a strong decrease in vectoring and holding time compared to the similar 2016 runway works period. The project received positive feedback from en-route and approach controllers and airspace users regarding the relevance and the efficiency of this new process. The next xStream exercise is planned for London Gatwick Airport (LGW) in the UK in 2018 and will aim to demonstrate single-runway E-AMAN operations taking into consideration departure demand. #1057.ATC1

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