

BEST User Group Amsterdam 2023 Review

David Marshall, Director ATC Services



Thank you

Thank you for attending this years' User Group kindly hosted by the Royal Netherlands Air Force at their impressive ATC training premises at Schiphol, Amsterdam.

It was great to see customers old and new, interacting, socialising, and sharing their operational challenges and experience.

It was our goal to ensure that this years' User Group was a more interactive experience with workshops and discussions to ensure that our products are developed and driven by our customers.

With a new Micro Nav team at the helm of User Group this year, we have learned a lot of lessons on what went well and more importantly what can be improved to ensure that we deliver an even better event next time.

Plans are already underway for the next BEST User Group to be held on 17-19th September 2024, in Winchester, UK. We are looking forward to providing a new itinerary for our next informative and interactive customer experience. We will keep you posted!

BEST User Group 2023 | **Review**

Interactive Sessions

It was our aim during the event to provide BEST product updates and direction of development through hands-on experience, gamification and workshops which allowed us to collate your thoughts and ideas.

From your valuable feedback, the BEST Radar vectoring game was well received and whilst it provided some fun and light entertainment, it was designed with real purpose. Collaboration with research partners at Royal NLR, allowed us to display the possibilities of introducing biometrics into our simulation products and collating the data during the simulation enabled us to continue the conversation and workshop on the development of BEST Insights.

The various eye-tracking devices presented by NLR offered differing attributes, but the concept overall was well received offering an ATC instructor the opportunity to monitor students with real time eye tracking either from a

tablet device or an adjacent radar console to coach better scanning techniques.

The attendees at User Group agreed that encouraging good scanning behaviours from ab-initio stages of training was hugely beneficial and allowed instructors an understanding of student scanning behaviours that up until now had been largely made on presumptions. Equally, eye-tracking technology allows students to self-assess their scanning patterns.

This technology could also be used in a 3D environment assessing runway, approach, manoeuvring areas and equipment scanning behaviours to encourage better scanning techniques and whilst the focus was on the ab-initio environment, the advantages of using this type of technology to promote better scanning practices to even the most experienced ATCOs has great benefits. The use of this

equipment whilst introducing a change into the ATC environment ('ATCOs don't like change') whether it be tools or infrastructure, will aid Human Factors experts understand the gravity of change and shape the training required.

Whilst this equipment is still in development, the potential benefits in terms of instilling robust scanning techniques from the ab-initio student stage of training through to unit training, may very well lead to greater rating training and unit validation success. Ultimately, these coached scanning techniques enabled by eye-tracking, build muscle memory and provide a solid foundation for ATC careers that can only enhance safety in the longer term.

The research and development of other biometric tools remain an interest to Micro Nav, we will endeavour to keep you informed and seek your feedback.



BEST User Group 2023 | Review

Did you know?

From your feedback and conversations during the event, the 'Did you know' session on new features and capability of BEST versions was well received.

It was noted that some customers do not always have the resource to scrutinise the BEST release notes in order to fully understand new functionalities and/or capabilities.

Release notes are currently being re-formatted to make easier customer reading and it is our intention that major changes in BEST versions will be accompanied with a briefing video which will give a better visual indication of the changes and perhaps offer a less time-consuming task.

The 'Did you know' element will continue at the next User Group event.

BEST Insights

The BEST Insights thematic was deliberately prevalent throughout the two days, providing us with your insight into how the product might be developed and identifying where BEST Insights can provide useful metrics for use at both training and operational ATC units and perhaps for wider analytical use with other stakeholders.

With your valuable feedback, further progress has already been made following the User Group event with the development of a de-brief tool that allows instructors to playback scenarios in 2D for radar/taxi patterns and in 3D to display climb and descent profiles. The ability to select individual tracks, watch the learning scenario build and debrief the student accordingly with good visual evidence to support instructor grading and comments can be extremely

beneficial to ensure progressive learning.

Electronically collating training reports together with data derived from simulation sessions, allows a multitude of metrics that will better inform the student, instructor and training manager. The ability to compare student by student, course by course, instructor marking practices can identify trends in training. This was very well received by the group.

We look forward to sharing further development with you next year.



BEST User Group 2023 | Review

Discussion and debate

As a collective within the aviation industry and in particular air traffic control training and simulation, the User Group event gives us the opportunity to raise and debate issues affecting us all and those views can be represented in a variety of industry working groups and conferences.

Thank you for your open and honest contributions during these sessions.

The shortage of ATCOs across the world was recognised as an issue worth debating this year to better understand our customers challenges and subsequently present our customer's views with the various national and international bodies that we interact with.

The fundamentals of core ATC training and indeed Unit training has changed very little over the past 30 years despite advances in simulation, learning technologies and a new generation of recruits

into the profession that may have been educated very differently to those of us that are reaching the twilight of our ATC careers.

Whilst the introduction of competency-based training and assessment objectives have been recently driven by ICAO, the basic structure of ATC training remains the same as it did 30 years ago and does not address the failure to attract candidates with the necessary aptitude of the correct calibre and continued poor pass rates at many ANSPs and ATC training facilities across the world.

The pre-pandemic ATC staff shortages were exacerbated by the COVID stall in recruitment and training by many ANSPs and a demographic of ATCOs that were recruited in the 1980s and 90s who are now nearing retirement. The introduction of initiatives such as competency-based training alone, does not address the current and forthcoming shortages.

In contrast, pilot training to address the low-cost airline boom of the 1990s has changed dramatically in the last two decades. With highly immersive, high fidelity cockpit stimulations it has reduced real time, real aircraft training and subsequently reduced "line standard" training. This, has in the main, been driven by the airlines for greater throughput but supported by Regulators insisting on a high level of realism in a fully immersive cockpit simulation environment. A realism that is not a regulatory requirement for ATC training.

There are, of course, counter-arguments concerning the lack of real-time experience before "line standard" is met. However, it has addressed in some considerable degree, the potential lack of pilots that would have restricted the low-cost growth over the past 20 years.

The risk to further aviation

growth may now be the lack of air traffic controllers. There have been numerous, well-documented occasions where airports have been forced to close because ANSPs have either failed to provide contingency or do not have qualified personnel. In addition, network flow management restrictions are commonplace due to a lack of qualified ATC personnel.

Undoubtedly, there are cost implications in providing similar high fidelity, highly immersive ATC simulation comparable to that currently afforded to pilot training. However, the cost implications of the closure of an airport operation and restricted airspace capacity due to the lack of ATC personnel is far outweighed by the cost of airport disruption and airlines due to cancellations, misconnections, displaced crew, aircraft and passengers.

ANSPs and Approved Training Organisations recognise the

need for greater throughput and success rates but perhaps are not empowered to propose the radical changes to ATC training required to the regulators and international bodies who have the greater influence and authority to implement the change required.

Perhaps the time has come for a more collaborative international debate and review of ATC training to ensure that it is tailored to the learning styles of individuals and embraces the technology available for advanced learning techniques whilst delivering enough ATCOs to serve the aviation industry. Delivering the next generation of ATCOs who are conscious of the environmental impacts of their controlling techniques whilst maintaining the safe, efficient and expeditious ethos of which we are so proud.

BEST User Group 2024
Winchester, UK

Plans are underway to host the 2024 User Group in the UK between **17th-19th September**. We look forward to welcoming you to the historic city of Winchester.

If there are any topics that you would like us to explore at the User Group in 2024, please email us at **bestusergroup@micronav.co.uk**. Your feedback is very important to us.



+44 1202 764444

micronav.co.uk

PART OF
**QUADRANT
GROUP**

The Quadrant Group's mission is to make a meaningful positive difference to aviation safety by providing and enabling the world's best-trained air traffic controllers. We do this by engineering the industry-leading tool for training, development, and operational testing, as well as offering consultancy and support services to assist customers in establishing and running training centres of excellence.