

# The power of voice

As rising air traffic volume continues to put pressure on air traffic controllers and we start to streamline and integrate all controller tools in the tower, **Frequentis'** *Hannu Juurakko* explains that there should be a focus on voice communication as an additional input sensor.

AS WE WORK towards integrating all the diverse controller applications and information relevant for air traffic control (ATC) operations into a combined and integrated digital tower, voice communication remains an essential tool.

By integrating the voice communication system (VCS) and allowing it to be commanded by an automated solution from a single screen, we are enabling further virtualisation of ATC operations. Fusing information from the voice communication system with information from the automation system creates a higher degree of automation in the digital tower, further supporting the controller by providing the right information at the right time. In so doing, new and advanced algorithms based on artificial intelligence will connect all relevant data, including voice, and provide the controllers with a much broader range of information in a more convenient way. This will allow more efficient airport operations, especially in remote and multi-remote towers, that will consider voice communication as an additional input sensor.

Using an IT VCS creates a lot more flexibility and operational cost benefits. By tearing down the silos of the individual tower systems and integrating them on common IT infrastructure, the real benefits of the IT VCS materialise. Aggregated information with higher value, presented to the controller through an integrated and intuitive user interface, improves situational awareness leading to enhanced safety and efficiency in operations. When we look at migrating tower operations to remote tower operations, or adding virtual tower operations onto local towers for airport expansion, the higher degree of automation, through inclusion of the VCS, will further support safe operations.

With voice integration into the digital tower it will also be possible to add new features, like enabling incoming voice communications to trigger visual alerts on the screen to show the operator which site they relate to. This would be the perfect support for a single operator managing multiple remote tower locations at a central location, further enhancing their situational awareness.



**Hannu Juurakko** is Chairman of the ATM Executive Team at Frequentis. His background includes more than two decades in the telecoms industry, holding various roles in high availability mission critical system development.

Frequentis is acknowledged as the number one supplier for safety critical communication systems globally. The Frequentis VCS3020X is trusted and proven by more than 25,000 air traffic controllers and sets the benchmark in its approach to the adoption of new operational concepts like virtual centres and area control contingency solutions.

The Frequentis Integrated Controller Working Position (iCWP®) solution delivers a unified front end for the controller that provides all the information necessary to carry out ATC operations. By deploying an iCWP® solution, ATC organisations can bring all essential information and controls into a single, operator-focused interface. Choosing a modular solution will help ensure scalability from small use cases to large airports. Integrating voice communication alongside ATC-specific automation functions will free controllers from the need to switch between multiple systems, helping them focus fully on safety while guiding traffic efficiently. ■



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