



**Automatic Terminal Information Service (ATIS) transcription  
uses Automated Speech Recognition technology**

How a leading commercial aircraft manufacturer helped their International Pilots understand native accents of tower crews clearly using Speech Recognition software in the cockpit?

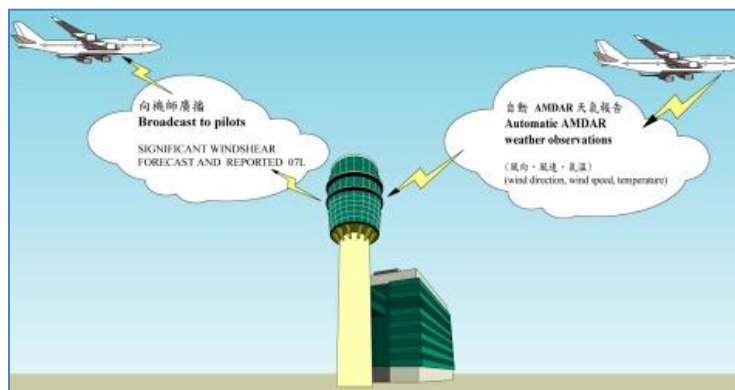
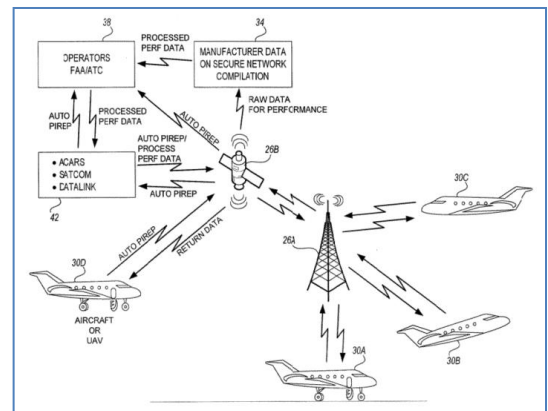
## The Client

Our customer is the world's leading commercial aircraft manufacturer whose customer focus, commercial know-how, technological leadership and manufacturing efficiency have set the standard for the aviation industry. Their unique approach across all its fly-by-wire aircraft families results in the highest possible degree of commonality in airframes, on-board systems, cockpits and handling characteristics, which significantly reduces airlines' operating costs.

## The Challenge

Airline pilots have to communicate constantly with landing Tower crew to understand the **runway location, wind speed, weather, visibility, temperature, traffic and birds**. When International Pilots arrive, they often find the native English accents of Tower crew very difficult to follow – this often leads to delays and confusions both during take-off and landing.

To solve this, Automatic Terminal Information Service (ATIS) tried installing off-the-shelf automatic transcription software but the accuracy levels were too low (around 50%) since the software did not understand the native English accents of the Tower crew.



## The Solution

Uniphore has rich experience in building voice solutions used by 4.5 million users across 24 global languages and 100+ dialects. Uniphore broke down the challenges into multiple components and created an automated speech recognition solution with the following capabilities:

- Noise cancellation & voice quality enhancement
- Language identification based on airports to filter out native languages
- Record, play and train to adjust for native accents
- Profiling users based on gender, accent, and equipment fidelity
- Integration with cockpit software

After multiple rounds of iteration with the cockpit simulator data, the automated speech recognition solution was tested real time as well. Now, the international pilots see a new dashboard which automatically transcribes the tower crew's voice and converts the same to a visual snapshot:



## Results

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Using Uniphore's automated speech recognition solution, our client achieved:

- Accuracy levels of 98% was achieved in transcribing information
- Multiple native accents were built into the solution
- Visual dashboards provided a clear panel for international pilots
- Audio search capability was built in to select and replay portions as required

## Video case study

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### Voice Recognition: Speaking the Right Language

Innovative voice recognition software is being developed by Airbus' Corporate Innovation Team – working in collaboration with Indian software company Uniphore – for improved pilot communication with air traffic controllers. A prototype of this programme has already received enthusiastic responses from flight test crews and customer airline pilots. For case study, [click here](#).



## About Uniphore

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The ability to use speech to communicate is a primary reason for the evolutionary success of the human race. Uniphore's solutions extend this insight to the evolution of human-machine interaction. Uniphore's solutions allow any machine to understand and respond to natural human speech, thus enabling humans to use the most natural of communication modes, speech, to engage and instruct machines. Enterprises across industry, size and geographies deploy Uniphore's solution to dramatically improve employee productivity and deliver superior customer service.

As a leader of voice-based solutions in India, Uniphore has pioneered the development of mobile applications with the combined capabilities of Speech Recognition, Voice Biometrics, and Data. Uniphore boasts a roster of high-profile, satisfied customers across multiple verticals – Financial Service Providers (mobile commerce & banking), FMCGs & NBFCs (sales force automation), and Agriculture, Healthcare, & Education (content delivery services).

Since its inception in 2008, the company has grown at an exponential rate, and today it supports nearly half a million registered end users on its platforms every month. For more information on Uniphore visit [www.uniphore.com](http://www.uniphore.com).

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