



ÇANAKKALE APV APPROACH FLIGHT TRIALS

METIS Workshop Benefits of EGNOS in Civil Aviation

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DHMI



100% state-owned organisation,

Provides nation wide air navigation services,

Operates 38 aerodromes,

**Installation and maintenance of air navigation systems
and facilities,**

Carry out flight inspection for all air navigational aids.

Participation of the Project and Kick off



DHMI's initial agreement in principle with TELESPAZIO was in 2006 to perform the trials. But then there was a delay in the Project.

Following the final decision taken, the Kick off meeting was held in Rome on 12 th June of 2009.

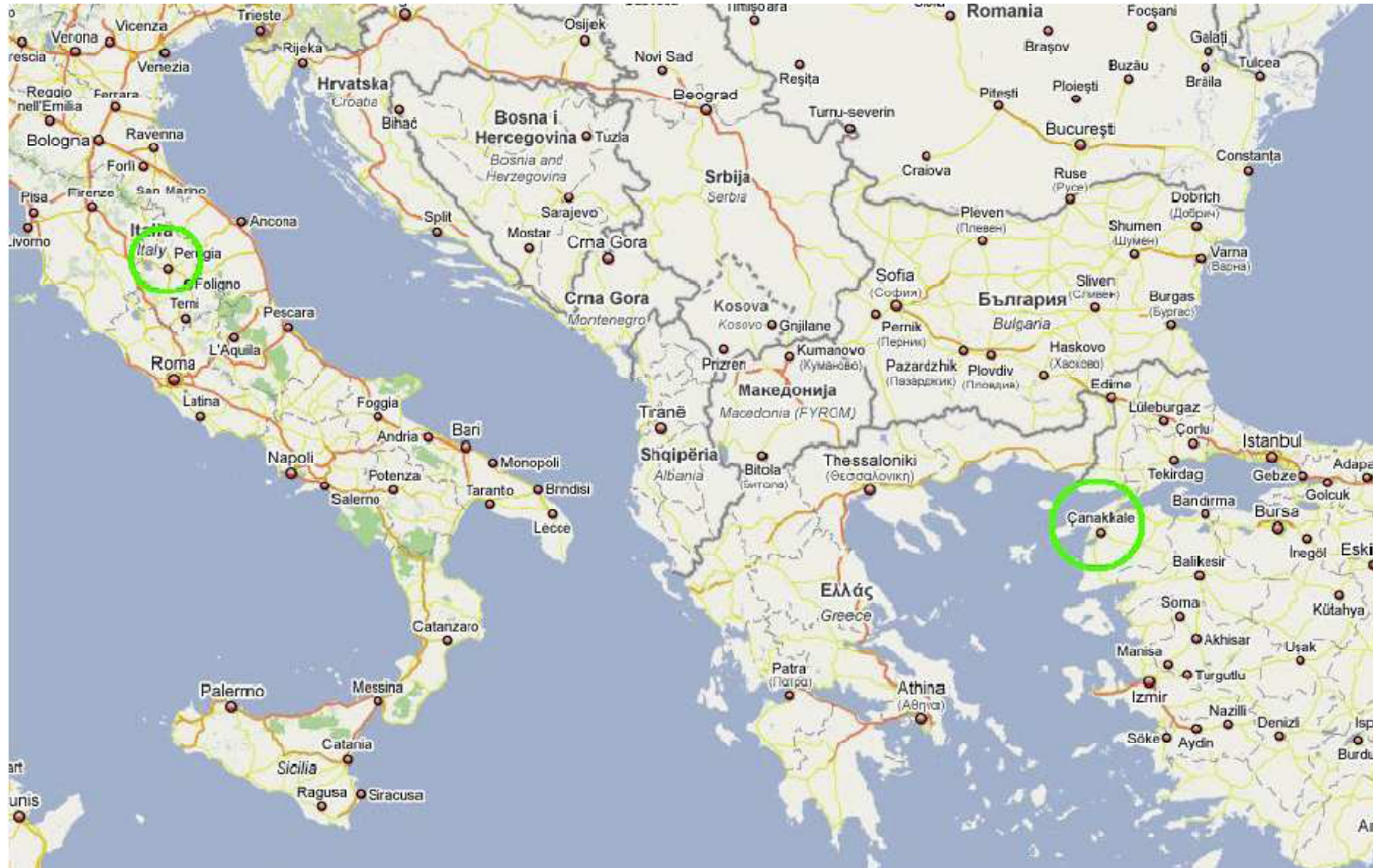
Action plan with regard to implementation included:

Çanakkale Airport was selected as the Demo site instead of Ankara, because of the shortages of the EGNOS signals in the area.

ÇANAKKALE



M E T I S



Participation of the Project and Kick off 2



PILDO Company and DHMI Navigational Dep were to establish in cooperation a new SBAS APP Procedure for Çanakkale.

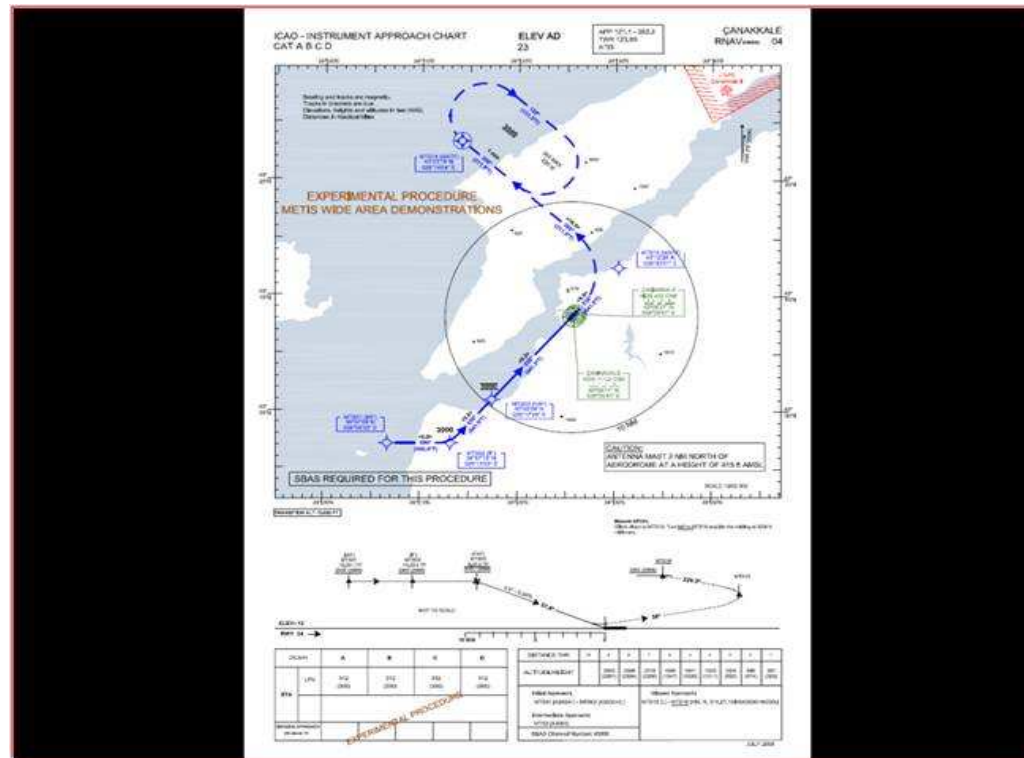
TechnoSky was to provide a flight inspection Aircraft equipped for the purpose.

Preparation for the site and flights were in October and November 2009.

Composition of Instrumental Flight Procedure



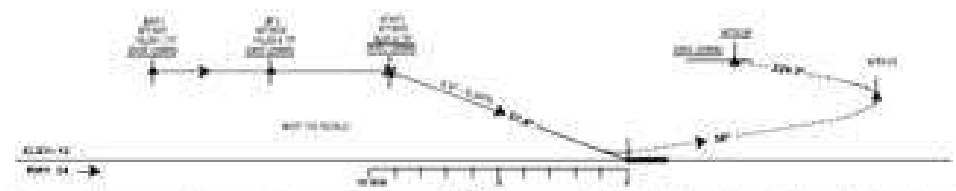
SBAS App Procedure was completed and published in Jeppesen in August 2009.





Revised 17/08/19

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CLASS	RNP			
	A	B	C	D
RNAV	400 (200)	300 (200)	200 (200)	100 (200)
SBAS				

CATEGORY	RNP										
	A	B	C	D	E	F	G	H	I	J	K
RNAV	400 (200)	300 (200)	200 (200)	100 (200)	50 (200)	25 (200)	10 (200)	5 (200)	3 (200)	2 (200)	1 (200)
SBAS											

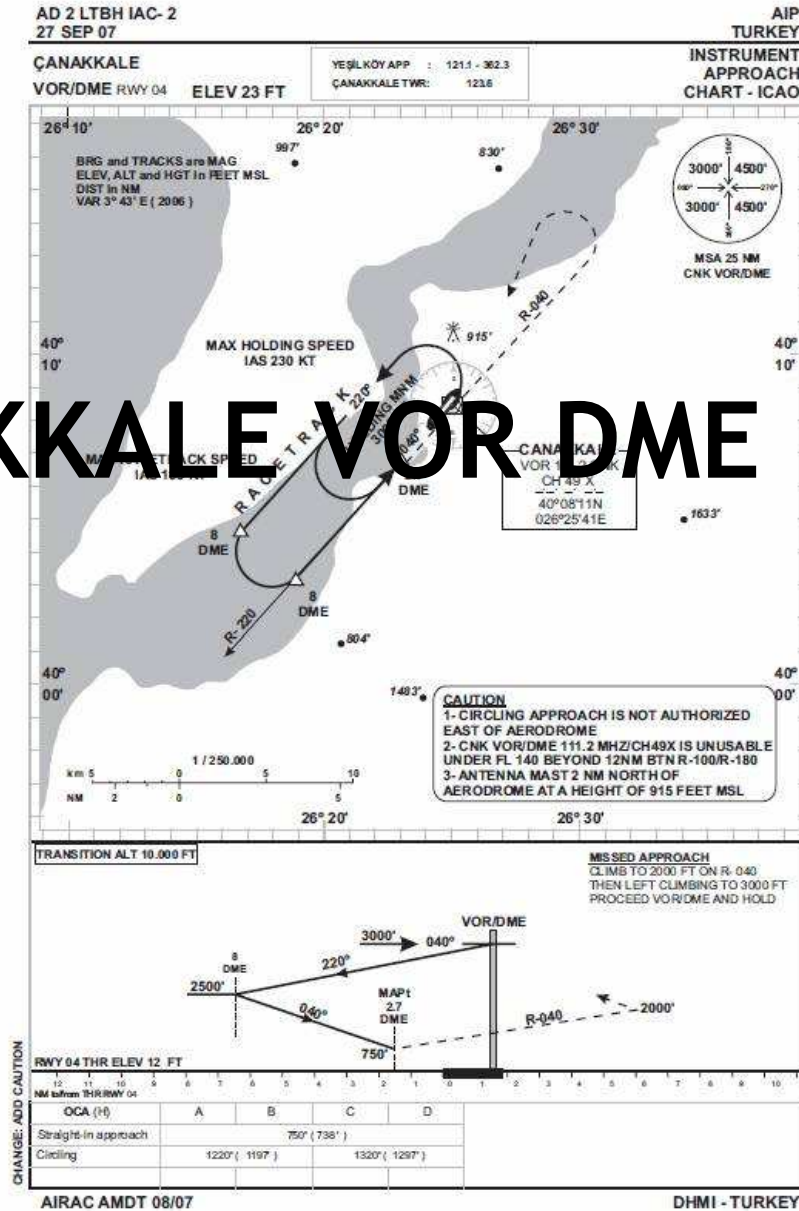
EXPERIMENTAL PROCEDURE



CURRENT (VALID) PROCEDURE



ÇANAKKALE VOR DME RWY 04



Preparation and Test Flights 1



The necessary ground equipment installed in Çanakkale airport during the flight campaigns which consist of:

A GPS/SBAS Septentrio AsteRx2e dual frequency receiver.
(The receiver incorporates internal logging capabilities)

A dual frequency Septentrio PolaNt antenna





Preparation and Test Flights 2



Static GNSS dual frequency data in .sbf format has been logged.

The logging process started one day before (4th of Nov) the start of the flight, and finalised one day (7th of Nov) after the end of the flight.



Flight demo sessions at Çanakkale approx. Took 4 hours... (5/6 November 2009)



Preparation and Test Flights 3



The flight trials consisted of a number of VFR approaches, using the SBAS procedures during 2 days.

The flight trials started on the day of arrival of the Aircraft before full stop landing and went on following 2 days.

First day (5th Nov) EGNOS signals were not functional in the area and hence the flight trials were inadequate.

Second day the signals were sufficient and the trials have been completed successfully. This revealed that the availability of EGNOS signals are not stable and robust at all times.



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Conclusion

It is the first time that a SBAS App and landing trial conducted in Turkey. The positive results showed that the system is beneficial for the aerodromes having non-precision approach.

Easy installation and function are the most important features. There are many other Airports like Çanakkale to benefit from this kind of Approach applications but first EGNOS signal coverage needs to be enhanced and guaranteed over Turkey

We are very pleased to have such a project in our country which surely will open the door for this kind of studies and applications in near future and therefore we seize this opportunity to thank all the parties involved primarily Telespazio, and the other partners Pildo and Technosky.



Thank you for your attention

METIS project

www.metis-project.eu

