

MEMS technology reaches for the sky

Innovative sensor technology for altimetry and engine control applications

HISVESTA

High Stability VERTICAL Separation Altimeter instrument

Project presentation

Aerodays 2011, Madrid, Spain

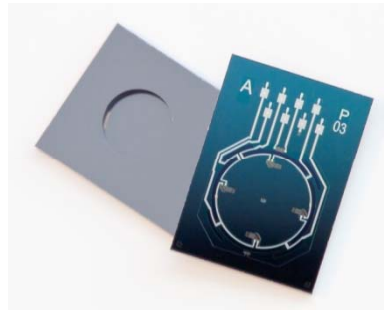
30 March – 1 April 2011

SEVENTH FRAMEWORK PROGRAMME
TRANSPORT /Aeronautics
FP7-AAT-2007-RTD-1
EC contract no. 213729-2008

www.sintef.no/hisvesta

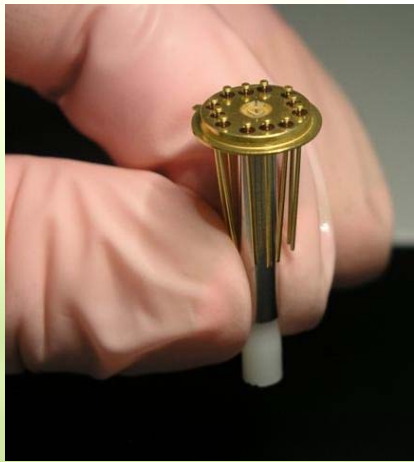


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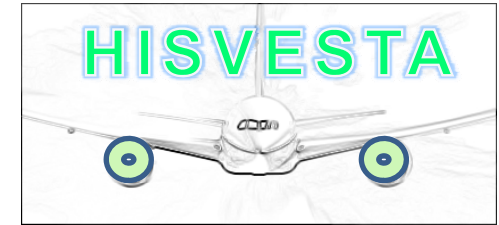


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HISVESTA is carried out with support from European Commission Framework 7 - Theme 7 Transport-Aeronautics



Project overview

WORK PACKAGES: 6 WP

WP1



New
Silicon solid
State MEMS

WP2



Package
into hermetic
MIL SPEC

WP3



Transducer
development
and qualification

WP4



ADC
Air Data Unit
Development

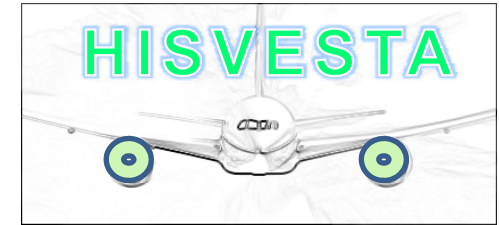
WP5



Test phase of
new concept
in real life
environments

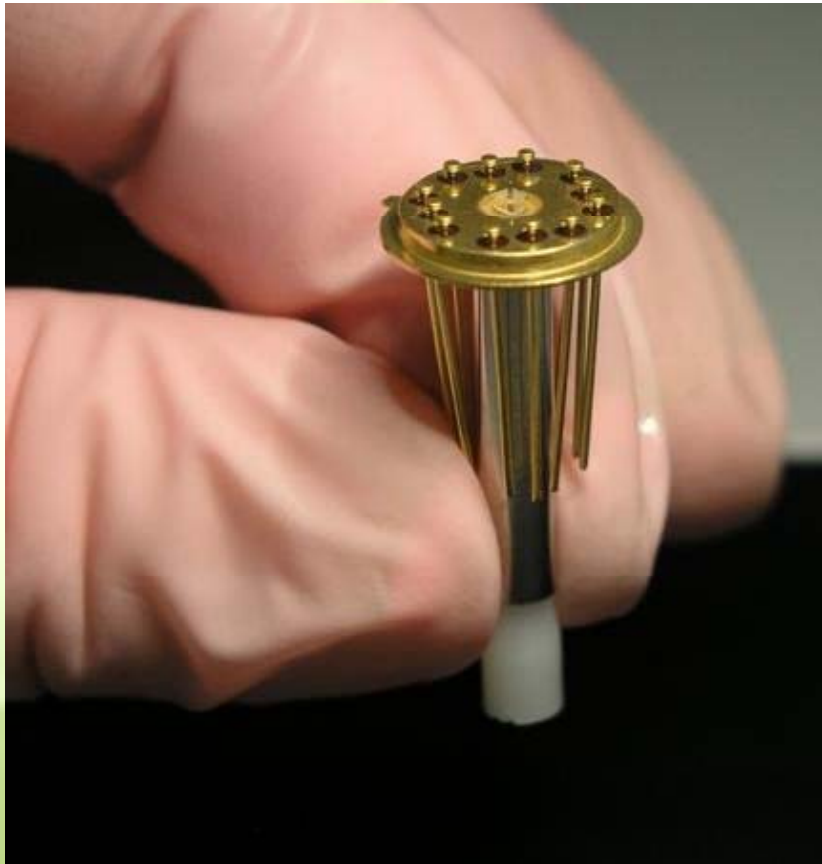
Success criteria's for the project:

- Demonstrate improved performance for a new Air Data Unit including new pressure transducers
- Demonstrate transducers with multi pressure range sensors, heated mode transducers and transducers with a frequency output
- Pushing the technology platform (sensor die, sensor package and pressure transducer) towards high temperature applications up to 200 °C.



- New SP83 sensor die
- 8 pressure ranges, from 0,25 bar to 60 bar
- Extreme long term stability performance

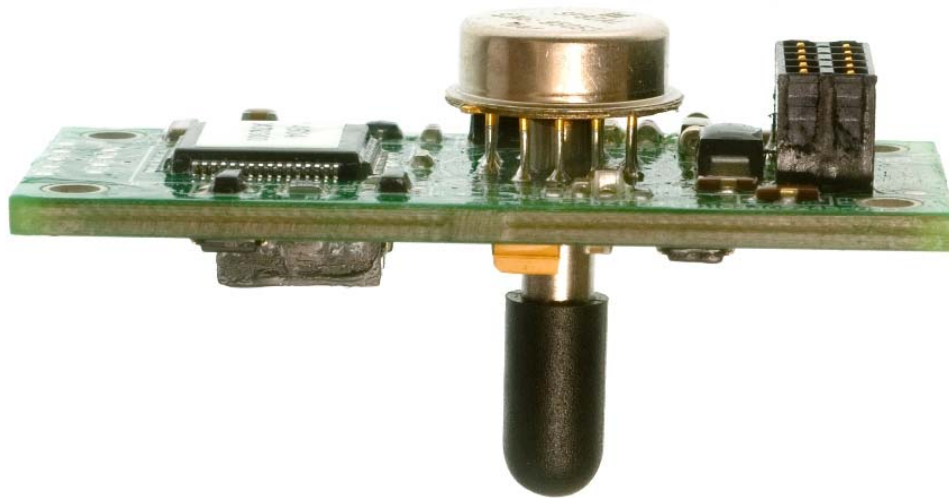
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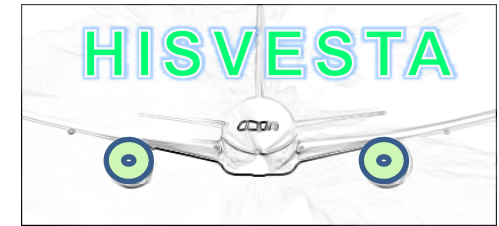
- Improved SP83 package



- TP4000 transducer



TP4000 Evaluation kit



Test the transducer performance!

Order from:

www.sintef.no/hisvesta

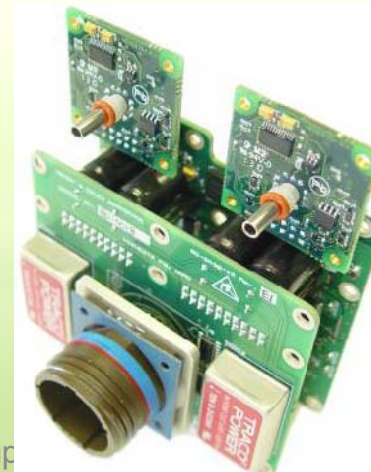
or contact:

sensors@memscap.com





- New RVSM compatible Digital Air Data Computer (prototype)
- Smaler, lighter and better performance than existing products to a lower cost.



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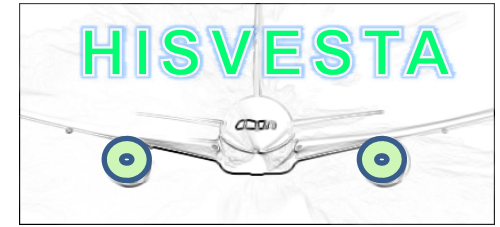
HISVESTA results:

- Development of a new altimetry module for fixed and rotary wing applications
- Increased flight safety, particularly in low visibility situations

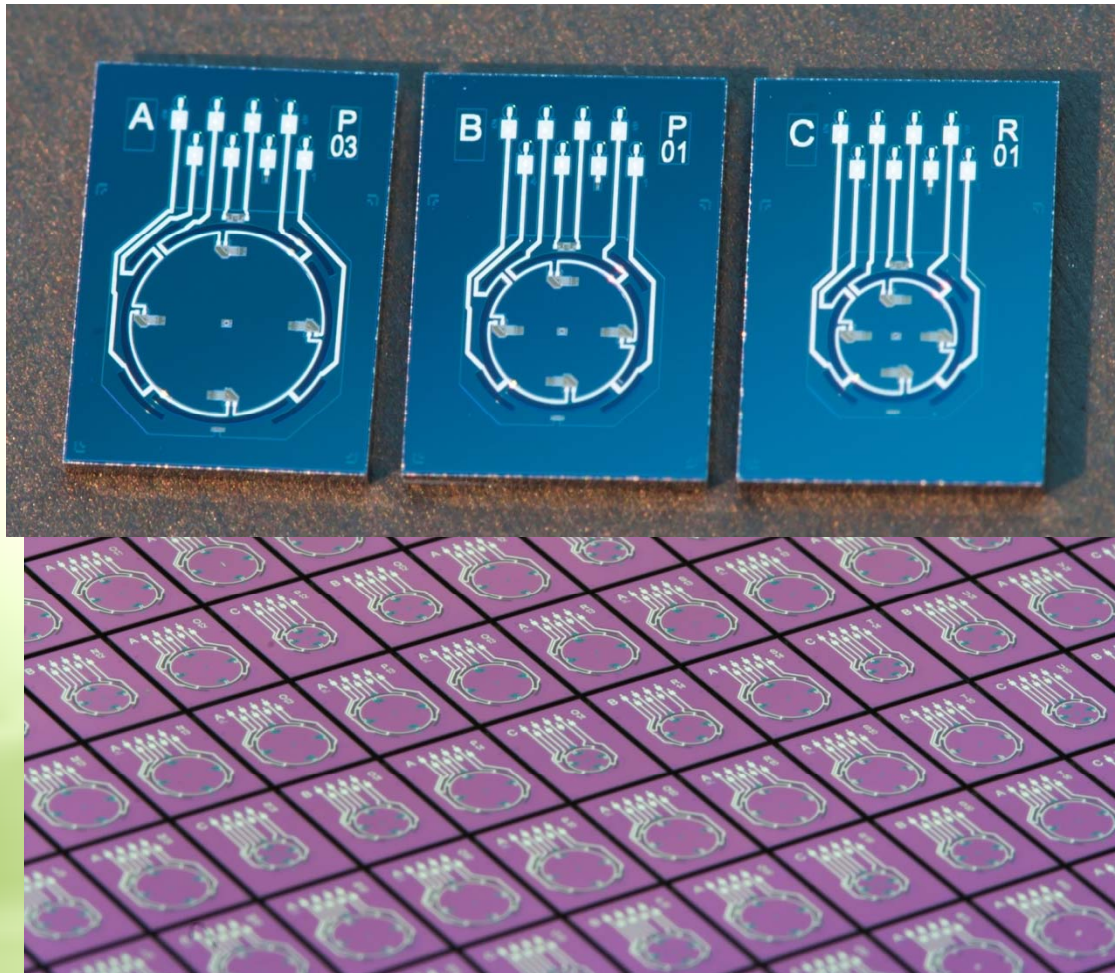


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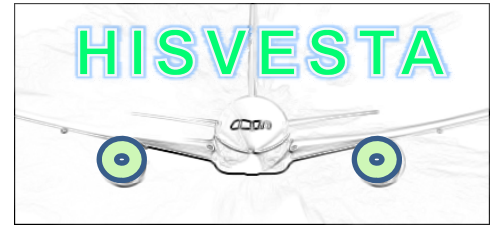




Innovations for tomorrow



- SP84 - innovative sensor design for high temperature applications (200 C)



Innovations for tomorrow



Today's FADEC (Engine Control Unit)

- New pressure control system for Full Authority Digital Engine Control (FADEC) systems
- Reduced emission of CO₂ and NO_x in the next generation jet engines

Ash-testing of sensors and transducers to be performed during spring 2011

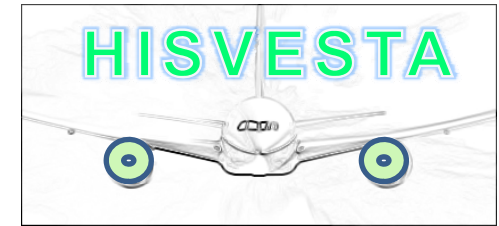




Aerodays 2011

30th March - 1st April 2011, Madrid (Spain)

<http://www.aerodays2011.org/>



Parallel Session 5B

(Paris room)

Systems for Safer Flight Guidance and Control

Project presentation

Thursday 31 March 16:10

High Stability Vertical Separation Altimeter instruments

Mr. Ole Henrik Gusland, Memscap AS



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