Opportunities for applied R&D&I, industry projects implementation, prototyping and manufacturing with CASTRA

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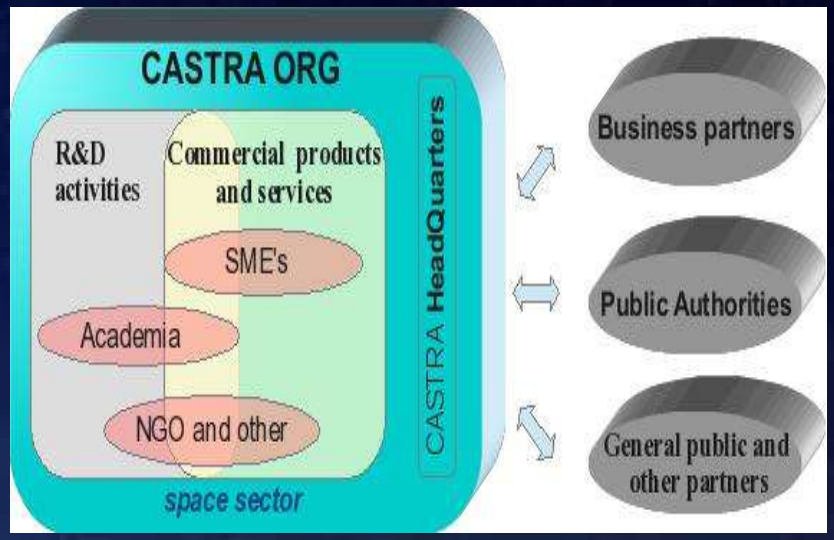
Who we are?

CASTRA is an independent NGO industry-driven consortia (cluster) of high-tech SME's, academic institutions and other interested stakeholders with expertise and capacity to jointly develop technologies, products and services in the aerospace domain and its applications serving society.

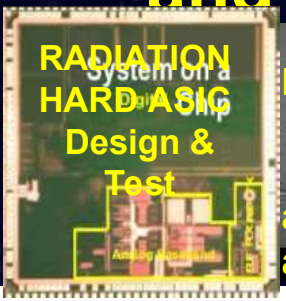
CASTRA's *vision* is to promote the research, innovation, technology and business developments in the aerospace sector to the benefit of society and to act as a major industry player.

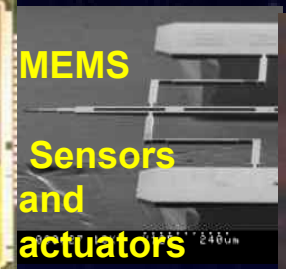
Map of CASTRA members across Bulgaria

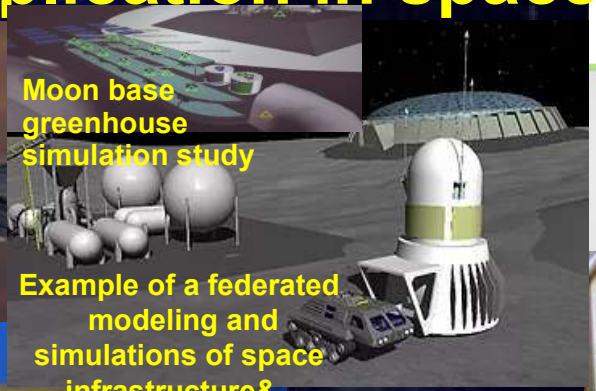


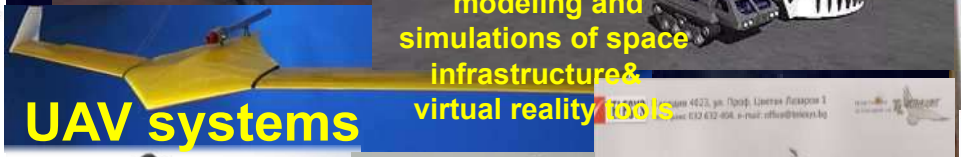
"Together we are stronger" - Bulgaria's strategy to success

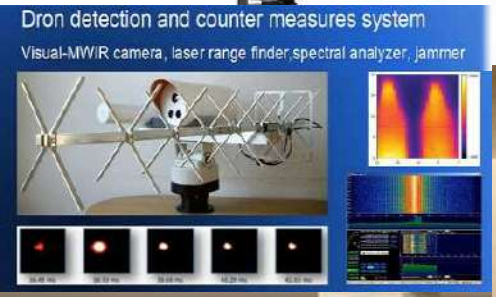
Examples of our high-tech SMEs industrial products and services with application in space projects

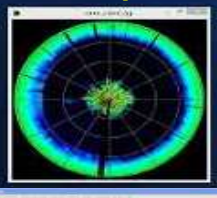


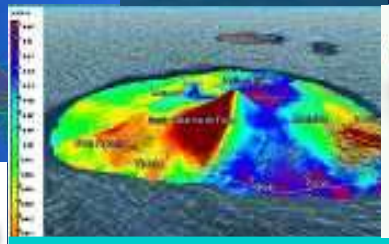


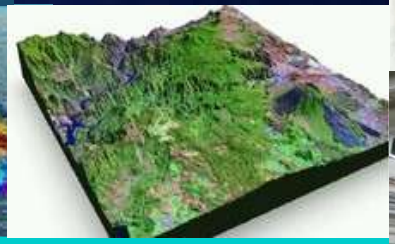












Multispectral and SAR remote sensing rocessing from air/space born sensors

CASTRA's APPROACH TO COOPERATION

- ✔ IDENTIFY MATCHING / COMPLIMENTARY BUSINESS *VALUE CHAINS OF COMMON INTEREST*
- ✔ ESTABLISH JOINT R&D AND B2B INTERACTION BASED ON THE CAPACITY AND EXPERTISE OF THE PARTNERS
- ✔ DEVELOP JOINT B2B AND B2C PROJECTS IN THE TECH VALUE CHAIN
- ✔ DEFINE AND IMPLEMENT A JOINT PRODUCT/SERVICE

"Together we are stronger" - Bulgarians strategy to success

1) Multi-Satellite Based Space Debris Surveillance Mission

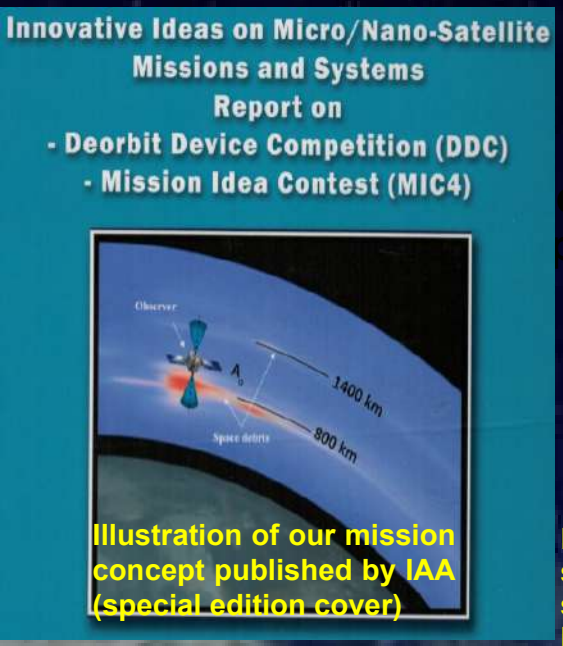
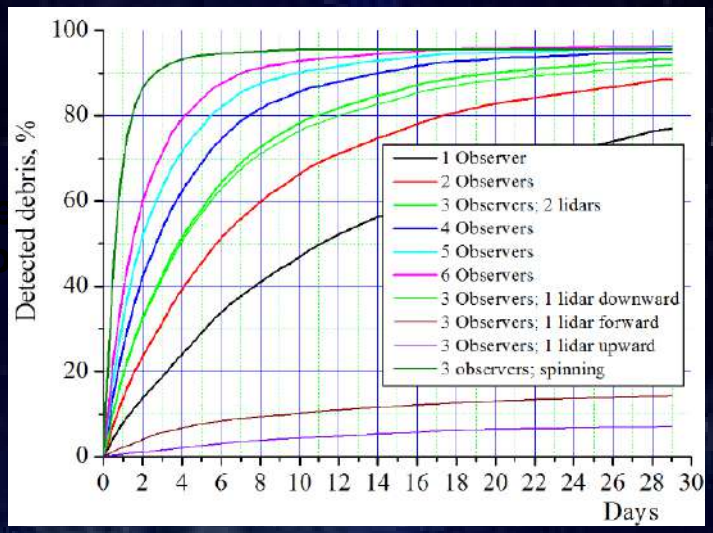


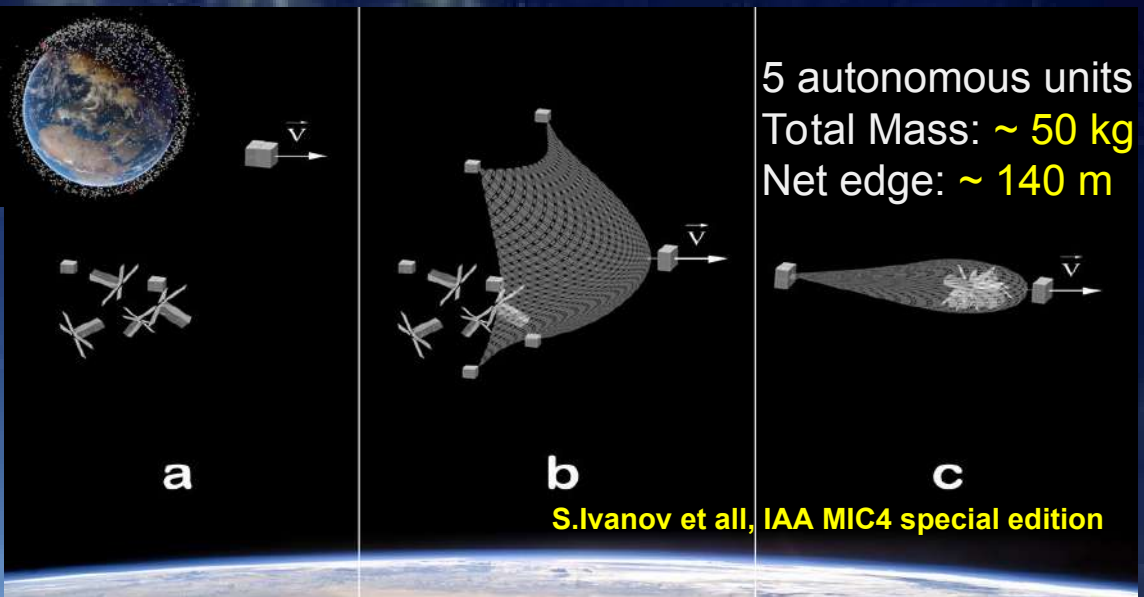
Illustration of our mission concept published by IAA (special edition cover)



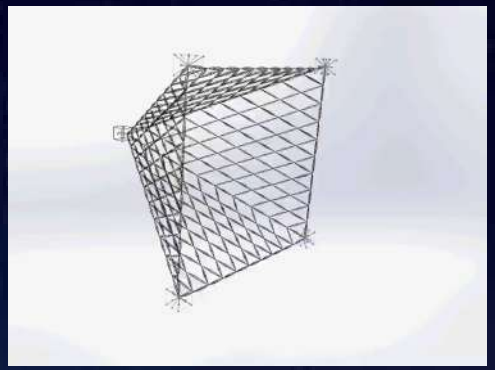
Lidar and multispectral meta material optical sensors (current ESA project) payloads for in-orbit space debris surveillance are in development. Mission design supported by EDA in 2016

The feasibility modeling study indicated the high efficiency of operating novel multi-satellite sensors for achieving high space debris detection coverage in short times.

2) Space Debris Removal using a small satellite swarm system



S.Ivanov et all, IAA MIC4 special edition

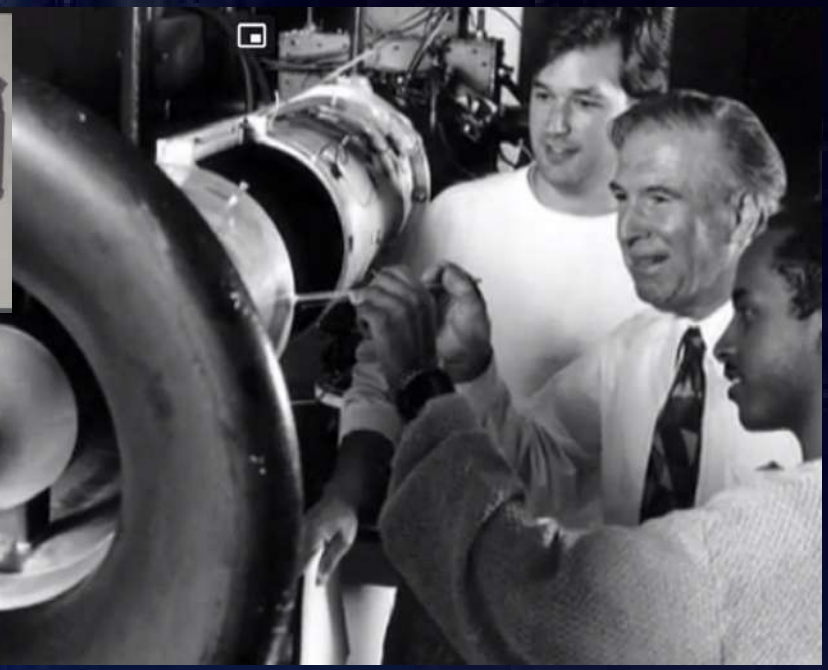


The model of the swarm ↔ net In-orbit behaviour and flight profile revealed the feasibility of the mission design concept

A journey of a thousand miles begins with a single step ! 千里之行，始於足下 (qiānlǐ zhī xíng, shǐ yú zúxià)

Laozi

LET US DO IT TOGETHER !



Neil Armstrong, the first man on the Moon, has never visited Bulgaria but the Bulgarian space engineer Prof. Widen Tabakoff was a key contributor to the Apollo program