Exploitable Results by Third Parties

13035 APPS

Project details

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Name: Maritime Surveillance System		
Input(s):	**Main feature(s)**	**Output(s):**
- AIS data - EO/IR data - Radar data - Sonar data - Acoustic data - Water/Air Pollution Sensor measurements - UAV images	- GIS based display of maritime tactical picture - Vessel classification/tracking - Suspicious vessel identification - Alarm generation - Seamless integration with other surveillance systems - Easy integration with various sensors	Maritime situational awareness
Unique Selling Proposition(s):	- Plug and Play interoperability - Situational awareness - Acoustic detection integration - UAV integration and small vessel classification - Cost effectiveness	
Integration constraint(s):	- Linux based - DDS middleware - P&P Layer Integration - Sensors (if not already supported) needs to be integrated	
Intended user(s):	Coast Guards, Navy	
Provider:	ASELSAN	
Contact point:	Burcu YILMAZ – buyilmaz@aselsan.com.tr	
Condition(s) for reuse:	Licensing	

Latest update: 6 November 2017

Name: Smart Fencing & Vessel Tracking Component		
Input(s):	Main feature(s):	Output(s):
▪ video streams ▪ context-aware info	▪ real time video image processing ▪ Smart fencing capacity	▪ Vessel Tracking ▪ Fencing vectors

Unique Selling Proposition(s):	▪ Track the target enabling detection and classification other aimed components operate more accurately and effectively.
	▪ Improves system video processing capacity thanks to smart fencing
	▪ Can be self-configured based on
	    ○ Self-situation and field analysis
	    ○ Situational awareness directives from other APPS / third party compatible components.	

Integration constraint(s):	▪ Context information should be provided through compatible interface ▪ Camera needs to be accurately calibrated	
Intended user(s):	▪ Third party integrators ▪ Video Camera Manufacturers ▪ Port Authorities in charge of coast maritime surveillance	
Provider:	▪ Nunsys S.L.	
Contact point:	▪ comercial@nunsys.com	
Condition(s) for reuse:	▪ Licencing ▪ OEM integrator agreement	

Latest update: 6 November 2017

Name: **T**arget **V**isualization **E**nhancement **C**omponent		
Input(s):	**Main feature(s)**	**Output(s):**
▪ video streams ▪ context-aware info	▪ Real time video image processing ▪ Advance filter and image enhancement	▪ Target visualization enhancement vectors ▪ Image frame processed ▪ Filter wizard

Unique Selling Proposition(s):	▪ Helps the operator by improving the video image coming from cameras ▪ No need to substitute or modify existing surveillance cameras ▪ Compatible when smart fencing provides optimal continuous enhancement ▪ The best enhancement algorithm is selected automatically using machine learning
Integration constraint(s):	▪ Context information should be provided through compatible interface ▪ Cameras should be accessible using a network interface ▪ Enhancement is only applied to visible range
Intended user(s):	▪ Third party integrators ▪ Video Camera Manufacturers ▪ Any organization with high needs for surveillance and/or monitoring with video
Provider:	▪ Nunsys S.L.
Contact point:	▪ comercial@nunsys.com
Condition(s) for reuse:	▪ Licencing ▪ OEM integrator agreement

Latest update: 6 November 2017

Name: Sensor Interface Device		
Input(s):	Main feature(s)	Output(s):
▪ NMEA0183 ▪ Maritime Safety Information from shore side system	▪ Supports RS-232/ RS-422/ RS-485 communication interfaces ▪ Supports LTE/ AIS/ ▪ Supports decision support (Collision avoidance, Anchor watch, Critical waypoint, Area related) ▪ GPS, LTE Comm., 6 axis sensor embedded ▪ Great connectivity with flexible I/O modules for integrating existing equipment and devices quickly and conveniently ▪ Compatible with IEC61162-1,2,450 ▪ Remote data acquisition and device monitoring for onboard sensors ▪ Easy to Configure and Remote Maintenance	▪ IEC61162-450

Unique Selling Proposition(s):	▪ Analyze the abnormality by connecting various kinds of sensors installed on the ship. ▪ It also receives navigation safety information from the land and displays it on the display terminal.
Integration constraint(s):	▪ To operate, 12-24 VDC power is needed ▪ More than 1 NMEA shipborne sensor is needed
Intended user(s):	▪ Mariners
Provider:	▪ GMT CO., Ltd.
Contact point:	▪ Kilyong Kim – yonjjang@gmtc.kr
Condition(s) for reuse:	▪ Commercial license

Latest update: 6 November 2017

Name: Advanced Collision Analysis System		
Input(s):	**Main feature(s)**	**Output(s):**
▪ AIS packets ▪ Area model ▪ Small vessels detected by visual sensors	▪ Risk analysis and identification of ship collision within a specific area/range ▪ Transmission of 3 type of alert messages through analysis of navigation factors (CPA/TCPA, TSS, etc) ▪ Sub-system based on CPA/TCPA and fuzzy algorithm to predict ship's collision ▪ Improved ship analysis algorithm for the vessels sailing inland water way	▪ Degree of risk ▪ Safety analysis

Unique Selling Proposition(s):	▪ Unique implementation of Fuzzy-based safety assessment ▪ Advanced algorithm for the vessels sailing inland water way.
Integration constraint(s):	▪ Need to use the protocol defined by GMT using TCP-IP
Intended user(s):	▪ Software vendors that provide decision supporting function for the maritime safety industry
Provider:	▪ GMT CO., Ltd.
Contact point:	▪ Kilyong Kim – yonjjang@gmtc.kr
Condition(s) for reuse:	▪ Commercial license

Latest update: 6 November 2017

Name: S-10x based Map Server		
Input(s):	**Main feature(s)**	**Output(s):**
000 file - Maritime Safety Information - Routes - Position of Incident	- Electronic navigational chart based on S-10x international standard - Overlay MSI(Maritime Safety Information) and routes	Tiled ENC(Electronic Navigational Chart) Image
Unique Selling Proposition(s):	Unique implementation of advanced ENC server for mobile application and monitoring system	
Integration constraint(s):	Need to use HTTP or Restful API.	
Intended user(s):	- Software vendors that provide the vessel monitoring system based on ENC - Mobile application based on ENC	
Provider:	GMT CO., Ltd.	
Contact point:	Kilyong Kim – yonjjang@gmtc.kr	
Condition(s) for reuse:	Commercial license	

Latest update: 6 November 2017

Name: Localization with Acoustic Vector Sensors on the ground		
Input(s):	**Main feature(s)**	**Output(s):**
▪ Satellite map image ▪	▪ Detect & localize acoustic sources ▪ 2D sensors deployed on the ground	▪ Ship location ▪ Classification
Unique Selling Proposition(s):	▪ The worldwide unique Microflown sensor is the only true particle velocity sensor for directional sound measurements in a wide frequency range. ▪ With an array of such directional sensors on the ground acoustic sources such as a ship can be detected and localized	
Integration constraint(s):	▪ To detect, a single sensor is needed ▪ To locate an array of multiple sensors is needed	
Intended user(s):	▪ Coast Guards, harbor authorities	
Provider:	▪ Microflown Avisa	
Contact point:	▪ avisa@microflown.com	
Condition(s) for reuse:	▪ Commercial product ▪	

Latest update: 3 November 2017

Name: Localization with Acoustic Vector Sensors in the air		
Input(s):	Main feature(s)	Output(s):
▪ Satellite map image ▪	▪ Detect & localize acoustic sources ▪ 3D sensors in the air	▪ Ship location ▪ Classification

Unique Selling Proposition(s):	▪ The worldwide unique Microflown sensor is the only true particle velocity sensor for directional sound measurements in a wide frequency range. ▪ The small lightweight technology can be deployed on various aerial platforms such as small quad copter and fixed wing drones. ▪ Ships or other acoustic sources can be localized with a single 3D acoustic vector sensor in the air
Integration constraint(s):	▪ Platform integration regulations ▪ Flight permission regulations ▪ Operational time limited by flight time
Intended user(s):	▪ Coast Guards, harbor authorities
Provider:	▪ Microflown Avisa
Contact point:	▪ avisa@microflown.com
Condition(s) for reuse:	▪ Commercial product ▪

Latest update: 3 November 2017

Name: Localization with Acoustic Vector Sensors on buoys		
Input(s):	**Main feature(s):**	**Output(s):**
▪ Satellite map image ▪	▪ Detect & localize acoustic sources ▪ Sensors deployed on the buoy	▪ Ship location ▪ Classification
Unique Selling Proposition(s):	▪ The worldwide unique sensor is the only true particle velocity sensor for directional sound measurements in a wide frequency range ▪ The small lightweight technology can be deployed on various maritime platforms such as buoys and boats. ▪ With an array of directional sensors on water acoustic sources such as a ship can be detected and localized	
Integration constraint(s):	▪ To detect, a single sensor is needed ▪ To localize an array of multiple sensors is needed	
Intended user(s):	▪ Coast Guards, harbor authorities	
Provider:	▪ Microflown Maritime	
Contact point:	▪ maritime@microflown.com	
Condition(s) for reuse:	▪ Commercial product ▪	

Latest update: 3 November 2017

Name: Vessel Detection Component		
Input(s):	**Main feature(s)**	**Output(s):**
▪ Video stream from thermal camera	▪ Detection of vessels on water ▪ Real time video image processing	▪ Vessel Detection
Unique Selling Proposition(s):	▪ Object detection on water (much more difficult than object detection on land) ▪ Thermal video streams are much less sensitive to changing light conditions (can see in the dark) and shadows ▪ Both small and big vessel detection	
Integration constraint(s):	▪ Thermal cameras must be used ▪ Cameras should be accessible using a network interface ▪ Cameras must be fixed (no Pan, Tilt & Zoom)	
Intended user(s):	▪ Third party integrators	
Provider:	▪ TKH Security Solutions	
Contact point:	▪ sales@tkhsecurity.com	
Condition(s) for reuse:	▪ Commercial	

Latest update: 16 November 2017

Visual Ship Detection, Tracking and Classification System		
Input(s):	Main feature(s)	Output(s):
▪ Video stream from surveillance camera.	▪ Detect and track ships over time in video stream. ▪ Classify each ship.	▪ Ship GPS locations over time. ▪ Ship classification.
Unique Selling Proposition(s):	▪ This is a world-wide unique system, all other systems use radar to detect ships. ▪ Detection is robust to variations in ship appearance and background variations. ▪ Detects small ships (in contrast to radar) and large ships. ▪ Works in any light condition. ▪ Integration with Vessel Tracking Systems (VTS).	
Integration constraint(s):	▪ Camera calibration is required for determining GPS locations of ships. ▪ Camera quality should be sufficient for local light conditions.	
Intended user(s):	▪ Port authorities, law enforcement, authorities ▪ Can be applied in harbours, along inland waterways and along the coast.	
Provider:	▪ ViNotion B.V.	
Contact point:	▪ sales@vinotion.nl	
Condition(s) for reuse:	▪ Commercial product.	

Latest update: 6 November 2017

Name: "Plug&Play Maritime Surveillance System for decision support through real time advanced 3D aware CEP engines".		
Input(s):	**Main feature(s)**	**Output(s):**
- AIS Data - Machine Learning Module inputs - Suspicious vessel behavior detection from heterogeneous sensors (Acoustic, IR, Visible and thermal cameras, video cameras, UAV, etc.)	3D Visualization GIS viewer connected with Open Data and SDI for visualization of vessels and alarms - Complex Event Processing (CEP) integrated with the 3D visualization GIS viewer and Machine Learning techniques - Mediation with GIS/Data Mining System	- Suspicious vessel behavior detection based on machine learning with 3D visualization in real time - Easy to use CEP user Administrator to generate rules - Easier access to open data - Complement VTS solution

Unique Selling Proposition(s):	A cutting-edge Plug&Play Maritime Surveillance System to increase the interoperability of heterogeneous sensors and systems, to reduce operational costs and to make easier the access to data and systems in real time
Integration constraint(s):	- DDS middleware - Drools BRMS - OS Multiplatform - TRL6+2 - Sensors and cameras (if not already supported) needs to be integrated - Integration with external systems should be analyzed
Intended user(s):	- Maritime and Port Authorities - ICT companies and System integrators.
Provider:	PRODEVELOP, S.L
Contact point:	Miguel Montesinos (Prodevelop's CTO): mmontesinos@prodevelop.es
Condition(s) for reuse:	- To be sold as a module within the framework of the already commercial product Posidonia Port Solution Suite©. - Licensing: Add price to the current price of the license of Posidonia Port Solution Suite©.

Latest update: 6 November /2017

Name: NANOTAKIP ONLINE MONITORING SYSTEM		
Input(s):	**Main feature(s)**	**Output(s):**
▪ Depth of sea water ▪ pH ▪ dissolved O2 ▪ turbidity ▪ conductivity ▪ water temperature ▪ air particles	▪ Easy integration of unlimited number of sensors regardless of type and brand ▪ Easy integration with other surveillance systems ▪ GIS based display ▪ remote error checking on the sensors ▪ Alarm generation ▪ User friendly	▪ remote water quality monitoring ▪ remote air quality monitoring

Unique Selling Proposition(s):	▪ 7/24 remote monitoring of water and air quality ▪ User-friendly software for situation management, detection rules management and visualization of alerts
Integration constraint(s):	▪ Electrical and power requirements ▪ Communication (internet) interface ▪ Dock station (if needed) ▪ 24/7 working computer (or server) ▪ Windows 7+ or Windows Server 2008+ ▪ MsSQL 2012 Standard + (less than 100 sensor MsSQL 2012 Express could be useable)
Intended user(s):	▪ Industry (Cleanrooms..) ▪ Municipalities ▪ End users (coastal guards, industry areas..) ▪ Smart cities
Provider:	▪ NANOBİZ
Contact point:	▪ Zeynep OKTEM, info@nanobiz.com.tr
Condition(s) for reuse:	▪ Licencing of online monitoring software ▪ Commercial product as a whole system

Latest update: 13 November. 2017.

Name: Plug & Play Architecture		
Input(s):	**Main feature(s):**	**Output(s):**

▪ Requirements	Addresses concerns of
	  ▪ flexibility
	  ▪ ad-hoc, dynamics
	  ▪ robustness
	  ▪ security,
	  ▪ manageability (being able to control/ orchestrate)
	-- TRL is still low --
		▪ collaborative interoperable system of systems orchestration framework and components

Unique Selling Proposition(s):	▪ The Plug and Play architecture concept designed and developed for APPS allows multi-agency collaboration in a multi-agency, mission centric context. ▪ It is a technology concept, that can be reused in architecture and design of new Thales products.	
Integration constraint(s):	▪ TRL is still low (3) – needs to mature to 5 - 7. ▪ protocol adherence (to be defined at design time)	
Intended users:	▪ Architects & designers of System of Systems –components, in areas such as; ▪ Logistics planning , Crisis Response and Management, Domotica, SmartGrids, IoT, electronic Product Lifecycle Management (ePLM, for example. in Productive4.0), IIoT, Advanced Persistent Threat (APT) detection (for example MASFAD-II)	
Provider:	▪ Thales	
Contact point:	▪ Bernard van Veelen - bernard.vanveelen@nl.thalesgroup.com	
Condition(s) for reuse:	▪ commercial, included in Thales product	
	Latest update: 22 November 2017	

Name: DORUK AEROSTAT SYSTEM		
Input(s):	Main feature(s):	Output(s):
▪ Payload Weight ▪ Wind Speed ▪ Operational Altitudes	▪ 20+ kg Payload Capacity ▪ 300-1000 m Altitude (AGL) ▪ 1+ Week Endurance ▪ Modular Gondola Design ▪ Low Operational Cost ▪ -20 ˚C/+55˚C Temperature Range ▪ 40 Knot Wind Speed	▪ Long-endurance missions ▪ Cost effective platform especially for long and fixed area surveillance
Unique Selling Proposition(s):	▪ Doruk is an aerostat system capable of performing at 1000 m altitude (AGL). ▪ The system can carry 20+ kg of payloads and enables long endurance missions. ▪ The aerostat is a very cost effective platform that is used especially for long and fixed area surveillance	

Integration constraint(s):	▪ If payload (camera, radar systems, communication relay) shall be provided by the user, the below listed features of payload should be provided.
	   o Electrical and power requirements
	   o Communication interface
	   o 3D Model for mechanical integration	

Intended user(s):	▪ Surveillance, Mobile Communications, Precision Agriculture, Disaster and Emergency Management, Early Warning, TV and Radio Broadcasting, Maritime and Road Traffic Management, Critical Infrastructure Security	
Provider:	▪ OTONOM TECHNOLOGY	
Contact point:	▪ ISIL KOLAGASIOGLU – ikolagasioglu@otonomteknoloji.com	
Condition(s) for reuse:	▪ Commercial Product	
	Latest update: 6 November 2017	

Name: DOLUNAY AEROSTAT SYSTEM		
Input(s):	**Main feature(s):**	**Output(s):**
▪ Payload Weight ▪ Wind Speed ▪ Operational Altitudes	▪ Up to 20kg Payload Capacity ▪ 500m Altitude (AGL) ▪ 3+ Days Endurance ▪ Modular Gondola Design ▪ Low Operational Cost ▪ -20 ˚C/+55˚C Temperature Range ▪ 40 Knot Wind Speed	▪ Long-endurance missions ▪ Cost effective platform especially for long and fixed area surveillance
Unique Selling Proposition(s):	▪ Dolunay aerostat system is capable of performing at 500 m altitude (AGL). ▪ The system can carry up to 20 kg of payloads and enables long endurance missions.	
Integration constraint(s):	▪ If payload (camera, radar systems, communication relay) shall be provided by the user, the below listed features of payload should be provided. o Electrical and power requirements o Communication interface o 3D Model for mechanical integration	
Intended user(s):	▪ Surveillance, Mobile Communications, Precision Agriculture, Disaster and Emergency Management, Early Warning, TV and Radio Broadcasting, Maritime and Road Traffic Management, Critical Infrastructure Security	
Provider:	▪ OTONOM TECHNOLOGY	
Contact point:	▪ ISIL KOLAGASIOGLU – ikolagasioglu@otonomteknoloji.com	
Condition(s) for reuse:	▪ Commercial Product	

Latest update: 6 November 2017

Name: MINISTEER Generic Control Unit for Unmanned and Autonomous Systems		
Input(s):	Main feature(s)	Output(s):
- Power Input is 6 – 14V DC - Estimated Power Consumption is 700mA at 9V - Sensor inputs - Platform control specifications	- Xilinx Zynq 7020 with Dual ARM® Cortex™-A9 MPCore™ processor - Compact size (H54.5 xW130xD185mm) with fanless design - IP67 protected and -40 to 85°C operating temperature range - Extension board and port availability for additional capabilities - Integrated INS/GPS Module - JAUS Architecture - Waypoints navigation (upto 2000 waypoints) - Portable integrated ground station - Onboard data logging - Sensor and actuator control algorithms	- Sensor Data Processing - Navigation Management - Command&Control - Smart Power Management
Unique Selling Proposition(s):	- MiniSteer is an generic system-on-chip control unit that performs a variety of tasks including sensor data processing, navigation management, command & control and smart power management of unmanned and autonomous platforms. - MiniSteer can be used in fixed and rotary wing UAVs, unmanned underwater and surface vehicles as well as UGVs. The unit is also used to control Otonom Technology's Aerostat and Airship platforms. - The hardware provides various interfaces (x8 ADC; x10 GIO; x2 SPI; x2 I2C; x8 PWM; x16 GPIO; x8 RS232; x2 RS485; x2 CAN; x1 GigE; x1 USB2.0) as well as general purpose I/O reserve slots for integration with different sensors.	
Integration constraint(s):	- Platform specifications for command and control capability should be provided - Sensor interface control document should be provided	
Intended user(s):	Unmanned systems, Integrated Autonomous Control for various Platforms, Navigation Management, Sensor Data Processing, Digital Communications, Command & Control, Smart Power Management, Electronic Control Unit (ECU)	
Provider:	OTONOM TECHNOLOGY	
Contact point:	ISIL KOLAGASIOGLU – ikolagasioglu@otonomteknoloji.com	
Condition(s) for reuse:	Commercial Product	

Latest update: 6 November 2017

Name: Sensor Plug&Play Interoperability Layer		
Input(s):	**Main feature(s)**	**Output(s):**

▪ Raw sensor data
  o AVS
  o AIS
  o Air particle
  o Water pollution
  o Ship classification
	▪ Convert it to standardized interfaces
	▪ Considerably decrease integration costs
		▪ Sensor Data in standard format for Command and Control Systems

Unique Selling Proposition(s):	▪ Integration of sensors to the command and control systems requires considerable efforts. With the use of standardized interfaces, the integration effort and time can be decreased to a high extent.
Integration constraint(s):	▪ The raw data that the sensors provided should be examined
Intended user(s):	▪ Sensor providers, Command & Control System providers
Provider:	▪ SRDC
Contact point:	▪ contact@srdc.com.tr
Condition(s) for reuse:	▪ Commercial product

Latest update: 24 November 2017

Name: Water Region Extraction component		
Input(s):	**Main feature(s)**	**Output(s):**
▪ Video streams	▪ Detects & localizes water areas ▪ Robust to sensor view, weather, water appearance change	▪ Binary image with water pixels = 1
Unique Selling Proposition(s):	▪ Detects water regions for arbitrary waterway types and shapes: rivers, channels, lakes, pounds and sea ▪ Robust to water occlusions: bridges, piers, docks, wharfs	
Integration constraint(s):	▪ Video sensor, video input sequence of at least 5 seconds ▪ SW constraints: no ▪ HW constraints: 4 MB RAM, any processor	
Intended user(s):	▪ Coast Guards, harbor authorities	
Provider:	▪ TU/e (Eindhoven University of Technology)	
Contact point:	▪ e.bondarev@tue.nl	
Condition(s) for reuse:	▪ Licensing	

Latest update: 24 November 2017

Name: Vessel Detection and Classification component		
Input(s):	Main feature(s)	Output(s):
▪ Maritime image	▪ Detects and classifies ships in the viewing area ▪ Covers all 8 main vessel types	▪ Bounding box around detected vessel ▪ Identified vessel category from 1 to 8

Unique Selling Proposition(s):	▪ All maritime vessel types are detected and classified, in total eight types ▪ Classification accuracy - 90% and higher
Integration constraint(s):	▪ SW constraints: no ▪ HW constraints: depend on performance requirements, for 0.5s response time, 8 core i7 Intel processor and GTX 1080 GPU with 4GB are required.
Intended user(s):	▪ Coast Guards, harbor authorities
Provider:	▪ TU/e (Eindhoven University of Technology)
Contact point:	▪ e.bondarev@tue.nl
Condition(s) for reuse:	▪ Licensing

Latest update: 24 November 2017