«URSA»

Tradition Group took advantage of its extensive R&D and manufacturing experience to deliver a unified trainable technology for recognition, a technical vision system with analytical capabilities, which uniquely allows us to make sure that the right technology is applied to the right application in the right place at the right time.

The document presents an overview of URSA and description of its implementations.

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Unified Recognition, Surveillance Analytical System «URSA»

Destination «Unknown»

URSA is an AI technical vision system, which provides an authentic and instant recognition of U-R-Interested-In objects within a huge data stream of objects (any kinds, any sorts, any conditions) and provides the resulting output in the way U-Want it to be, at the same time, generating database of the results.

The solution can be implemented to meet the requirements of the following:

- Traffic Management to control, search, & track vehicles and traffic management at highways, motorways or control posts;
- Similarly, it can be used for railways, airways, sea and river transportation;
- Premises Security manage, control housing complexes, buildings, manufacturing offices, or any other accommodation;
- Anti-terrorism Locate People, left-over objects in public places, like the underground, railway stations, airports and any other public place;
- Operators of Internet search services for multimedia streams processing;
- Intellectual Soldier security forces can utilize URSA in several aspects.
- Unmanned spies intellectual recognition algorithms provide extensive possibilities;

Subsystems

«Image Maker» - the feeder of URSA, generates a series of snaps from a vast network of Video collectors;

«Image Processor» – the heart of URSA, analyses the output from the maker, performs recognition tasks and identifies their characteristics related to their geometry, dimensions and functionality;

«Integrator» – the hands of URSA, provides integration with external systems to provide an adequate presentation interface for the users, (local or remote) using any industry format;

«Core» – the body of URSA, provides a platform for mutual Interaction of all the subsystems;

«Interface» – the face of URSA, allows an easy-to-use Man Machine Interface;

«Management tools» – the brain of URSA, allows to configure, manage and service the whole systems; «Safety tools» – provides robustness and security to

the technology, software, inputs and outputs.

U-R-Interested-In objects

- Vehicles (registration number, model, make etc);
- Railway locomotives, coaches, & containers (number, type etc.);
- Sea and river ships, carriers, & containers (type, number etc.);
- Aero planes at airports, & hangars (type, number etc.);
- Human beings at housing complexes, , buildings, manufacturing offices, or any other accommodation;

- Human beings from mass collection for example, in the underground, railway stations, airports and any other public place
- Any objects related to antiterrorist activities;
- Objects related to intelligent systems with various functions ;
- other groups of data entities

Implementation

URSA can be implemented as a stand-alone system (for example at a single site, whatever it may be) as well as a distributed integrated system with centralized operation management.

URSA will manage the complete interaction in terms of informational exchange with data bases of all levels with complete security options or with operators wherever they might be located based upon the operation they are functioning on.

URSA could be applied in infrastructure or mobile mode. As mobile systems deliver more and more power now, URSA brings intelligence to transportation systems now.

Current Development

Presently, the company's team of researchers is working on development of mathematical approaches that should transform URSA into a self-trainable system, able to classify objects in the changing environment, which will lead to further applications in robotic vision.

U.R.S.A.





