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Perfiles Tecnológicos



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A software for drawing space-time diagrams suited for the optimisation of conveying systems

(08 BE 0315 2S00)



Abstract

A Belgian SME is looking for a software allowing to draw space-time diagrams helpful in the analysis of conveying systems. A fast optimisation of production lines should be facilitated. A partner is sought for a commercial agreement requiring technical assistance or a technical co-operation.

Description

A Belgian SME is looking for a software allowing to draw space-time diagrams of a production line, suited for the analysis of the progression of glass sheets in conveyor systems. Those diagrams should facilitate the assessment of the overall impact of test modifications brought on the speed of conveyors.

The sought well-adapted tool is needed for enabling fast optimisation of specific applications, such as automated glass handling chains.

Technical Specifications / Specific technical requirements of the request

The produced 2-dimension diagrams should illustrate the progression of a glass sheet on the conveying line. On the abscissa, the displacement should be represented in meters and, on the ordinate, the time evolution should be represented in seconds. The slope of the diagram should thus inform on the speed of a conveyed element on each step.

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Abstract

A French SME has developed an innovative projection screen that can be discreetly integrated on the house or boat wall or conferences rooms. This patented screen is perfectly tensioned during the video projection. When not in use, it closes in three parts, leaving a paint or poster visible. The French company is looking for a partner interested in a licence agreement or in a commercial agreement with technical assistance, all across europe.

Description

The use of full HD (High Definition) video projectors designed specifically for home cinema applications is becoming more widespread in homes, in hotels and in conferences rooms. Their uses need a specific screen and today nobody wants a "school screen" cockling, deforming the projected image and attached at his ceiling. That's why the French company has created a new generation of projection screen, able to remedy those drawbacks by closing in three parts behind a paint or wall decorations.

The closed innovative screen is taking less space than a usual one and it has a decorative function as it is hidden behind a wall decoration.

Once open, the tensioned screen is not cockling and no creases appear, deforming the projected images. This invention is particularly adapted to reduce the front and tensioned projection screen size, and discreetly integrating it in living rooms, or conferences rooms, business establishments, academic institutions, with full HD (High Definition) video projectors. The product is already commercialized under different sizes: from 108*205 cm to 146*271cm.



This invention is particularly adapted to reduce the front and tensioned projection screen size, and discreetly integrating it in living rooms with full HD (High Definition) video projectors. Contrary to projection screen already commercialized, this new generation of tensioned screen has the particularities:

- to easily close behind a wall decoration, reducing the place needed for the screen when it is not used
- to be tensioned that means that the screen is not cockling and there are no marks of creases on the screen when it is open

Current and Potential Domain of Application

This screen technology can be applied to all video projection markets.



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Innovations and advantages of the offer



Abstract

An Israeli software company has developed a software application that saves a lot of software testing and maintenance time. The product acts like a black-box recorder in airplanes. It records the user actions on specific applications (or websites) and monitors many other applications' parameters. When the user detects a problem, he can easily send a comprehensive, accurate and understandable report to the predefined destination. Seeking strategic partnership.

Description

Reporting software defects is extremely important for software development (testing) and software maintenance.

A bug report relays information on a defect from the user who encountered it to the developer. The useful bug-report needs to be: precise (otherwise causing waste of time), comprehensive (so as to replicate the problem easily) and understandable (in order not to get back to the reporter and ask him for clarifications). The offered product meets the above requirements and acts like a black-box in an airplane. It records the user actions on dialogues of specific applications (or websites), and monitors many other applications' and system resources. It also enables you to define files that will be automatically attached to the bug report. When the user detects a problem, he clicks "Ctrl-Ins" and the product sends a comprehensive report to the predefined destination. The developer (or a technical support guy) that receives the report (via email or a bug-reporting tool) double-clicks on it, sees what the user did prior to the defects and other important details.

The product is targeted for QA Technicians, Helpdesk Technicians, Support Teams and Software Vendors. It can be used for Desktop applications as well as for Web-Applications.

In general, the product saves a lot of time both for the reporter (QA-technician or end-user), and the

destination (tech-support technician or software engineer).

The company had been established in 1998 and has several unique software products.

Innovations and advantages of the offer

Innovative software was developed especially for "reporting software defects" and therefore has the following advantages over other recording tools on the market:

- selectivity, i.e. recording the predefined specific applications,
- consuming minimal computer resources (CPU, central processing unit, and disk space),
- recording in cyclic files so there is no need for maintenance,
- reporting much more information than just the user's actions on the user interface, like those on the market,
- having many unique features for Web-Applications such as capturing all the HTTP requests & response. The software synchronises these requests & response with the user actions.
- ability to configure it for automatic creation and sending a bug report to predefined destination (or attach it to a bug reporting tool). This makes it very easy to use.
- It can be configured from one computer for the entire network.
- Recording and reports can be password protected.
- Providing for several methods to view the reports.

Current and Potential Domain of Application

Any company in any field with big IT department.
Software resellers dealing with the enterprises.
QA (quality assurance) teams, IT departments,
Software developers, Helpdesk teams.



ELECTRONICS, IT AND TELECOMMS

Technology Offer

Visual Recorder for Logging & Reporting Software Defects

(08 IL 80ER 27IE)



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Abstract

A French SME has developed a flight recorder that allows recording of the highest and lowest values for each parameter per flight. The developed system is resistant to airplane crash and allows 3D flight visualisation. A partnership is sought for commercial or technical collaboration with an aircraft manufacturer.

Description

This French SME has two main activities :

Flight Testing : development flights, certification flights and acceptance flights for aircraft ranging from ultra light aircraft to airliner.

Research, development and production of aeronautics embedded systems : Flight data recorder (Apibox System), Engine monitoring, Auto-pilot, Specific customer development and production. (Aeronautics Approvals: PART 21G (production))

The so-called "APIBOX" is an open system designed to record a large range of parameters.

Applications : Engine monitoring, Debriefing for training, Performances analysis.

•For Preventive analysis, the APIBOX allows recording for each flight of the highest & lowest values for each parameter. A preventive maintenance can be performed after analysing the recorded data by the APIBOX system. The structure's supervision, the respect of the airframe limitations, the engine parameters are some examples of the APIBOX abilities.

•For training support, on top of recording Min/Max data, APIBOX can display the last flights' details at 10Hz and 1Hz frequencies. It's a unique opportunity for training support because each pilot can see his flights in 3D with all the desired data displayed on a synthetic and user-friendly graphic. Thus, the school debriefing will become easier especially for the first

solo cross-country flights where it's difficult for the flight instructor to assess the flight performance of its student

•For incident/accident analysis, a harden version of the flight data recorder resistant to crash and fire is also available. Today, a high percentage of crash investigation does not lead to any conclusion because of lack of witnesses or exploitable proof. APIBOX can mean the end of this fact by allowing getting some clues of the crash explanations.

Innovations and advantages of the offer

The APIBOX has a bus allowing input from a great number of additional modules increasing its functionalities: additional sensors, multi function display, removable storage, system management, arinc data, customer application.

Current and Potential Domain of Application

Flight tests, flight safety, flight data recorder

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Abstract

A small Slovak company has developed a unique fingerprint recognition algorithm. This algorithm introduces unprecedented speed boost and achieves up to 600.000 matchings per second on a standard single processor PC. The algorithm's accuracy, top-ranked by Fingerprint Verification Competition 2004 guarantees one of the lowest error rates encountered in the fingerprint recognition industry. Partners are sought for the development of further applications and to exploit the existing know-how.

Description

The company owns a state-of-the-art fingerprint recognition algorithm, which has proven to have many unique features.

This algorithm introduces unprecedented speed boost and achieves up to 600.000 matchings per second on a standard single processor PC. The algorithm's accuracy, top-ranked by Fingerprint Verification Competition 2004 guarantees one of the lowest error rates encountered in the fingerprint recognition industry. It also supports and accepts standards, such as ANSI/INCITS 378-2004 and ISO/IEC SC37/19794-2. This standard support gives our partners the ability to pursue government opportunities. It also guarantees high level of interoperability between different fingerprint scanners.

The fingerprint recognition algorithm consists of two main parts: extractor and matcher. The extractor takes as input raw fingerprint image and encodes it in specific fingerprint template. It supports not only images from various fingerprint sensors (optical, capacitive, thermal,..) at different resolutions (250 DPI, 500 DPI,...) but the extractor is also optimized for inked and rolled images used in criminal applications.

The feature extractor was designed to work well with low quality and partial fingerprint images. The quality of fingerprint images can be degraded due to noisy

sensor, finger humidity, low/high pressure during acquisition. The algorithm is able to considerably enhance the overall image quality and to fix possible defects in a way that these will not alter recognition process. These advanced image enhancement techniques have direct impact on overall system's accuracy.

The matcher's purpose is to compare two fingerprint templates - the matcher doesn't work with fingerprint images but only with resulting templates. The matcher produces similarity score which says whether two fingerprint templates represent the same finger or not.

The matching algorithm can equally perform a high-speed identification search. The process of identification can be seen as a generalization of verification. The goal of an identification process is to find a person in a database containing multiple identities (1:N search). The database size can be variable - from a few hundreds to tens of millions templates can be stored in the database depending on the application.

This matching algorithm uses internally developed search technique that ensures high accuracy and one of the industry lowest error rates.

Innovations and advantages of the offer

The matching algorithm performs extremely well in identification tasks due to the extraordinary matching speed that can achieve up to 600.000 matchings per second. Furthermore, identification process is fully scalable, for example with 17 PCs we would overpass 10 million matchings per second.

Most importantly, the matching algorithm achieves such a high matching speed without considerably degrading recognition accuracy.



ELECTRONICS, IT AND TELECOMMS

Technology Offer

Fingerprint recognition algorithm

(08 SK 69CT 2RWS)



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New knowledge based-simulation software for sheet metal forming application and for know-how capitalization (08 DE 0855 2S08) 

Abstract

A German University spin-off with expertise in sheet metal forming developed a software for simulation in car body and general construction processes in sheet metal applications. The innovation lies in the ability of the software to process data from past projects and integrate them in the current simulation task, thus saving development time (up to 30%) and resources. The software is available for licensing by end users or for commercial agreements with manufacturers of complementary products.

Description

Process simulation is today widely used for designing forming processes in the automotive industry. Unfortunately conventional technologies do not offer the possibility to transfer data from previous simulation processes to new processes. Thus, even if there are similarities between old and new processes, existing know-how and findings from previous projects cannot be utilized. Therefore costly development time is unnecessarily extended. It may cause even more severe problems when relevant staff has left the company or is ill or on holidays. The required know-how is not available at a crucial point in time.

This is where the development of the German university spin-off comes in.

The company is specialised in process design in sheet metal forming based on finite element analysis, integration of statistical methods (Statistical Engineering), feasibility studies within the context of product development and in analyses of forming processes, particularly with regard to the application of new materials.

Their software development solves the above problem and makes existing know-how transferable to new processes. Company know-how becomes

generally retrievable. It is a worldwide unique technology to forecast the feasibility of forming applications extremely fast.

The software makes it possible to read, process, manage and transfer data and results from previous simulation processes and integrate these findings in the new simulation task. This is done in a completely automated way via statistical methods and artificial intelligence. The software is compatible with the three standard systems used currently in automotive industry. This leads to a significant reduction in product development time (approx. 30%). In addition mistakes and failures are minimized. Know-how is made available and useable throughout the company.

Thus, the software package can be applied as a know-how-source within the company. The innovative simulation technology, extreme ability, flexibility and long term profitable value ensure industrial acceptance.

Innovations and advantages of the offer

- It is for the first time possible to integrate data from previous simulation processes automatically in new projects.
- Company know-how is made available across the departments (know how capitalization.)
- New type of know-how and knowledge management.
- Tedious calculation times are reduced.
- Product development time may be reduced by up to 30%.
- Saving human and financial resources.
- Making know-how available.
- Minimising mistakes and failures.

Current and Potential Domain of Application

To date mainly automotive industry. However, all areas of sheet metal forming are possible



ELECTRONICS, IT AND TELECOMMS, INDUSTRIAL MANUFACTURING,

Technology Offer

New knowledge based-simulation software for sheet metal forming application and for know-how capitalization (08 DE 0855 2S08) 

applications, e.g. household appliances etc.
In future the technology could also be adapted to plastics processes.

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Abstract

An Irish SME involved in the logistics sector has developed a new load optimisation software program specifying how to build orders onto pallets for transportation. It is presently being used daily by a food processor to prepare orders for delivery to a multiple retailer. Partners from the logistics & Electronic Data Interchange related industries are being sought for the development of other applications.

Description

The load optimisation program is a 3D sorting program that specifies how crates of different sizes can be sorted and stacked onto pallets in a space optimal manner. The program is currently targeted for FMCG (Fast Moving Consumer Goods) processors, typically fish, meat and fruit & veg processors.

The program is typically used by logging into a web application where it is hosted, and uploading an EDI order file. The program then generates the Pallet Building Plan and barcodes and outputs this information to a PDF format.

The sorting/optimising rules can be configured for specific industries.

(Note: this program only works with known standard crate sizes; it is computationally unfeasible for the application to calculate an optimal solution for cardboard boxes of various sizes. Europe currently uses 3 standard crate sizes).

- While load optimisation software exists for freight containers, market research have found that there is nothing comparative for smaller scale FMCG (Fast Moving Consumer Goods) industries.
- Most EDI-based order applications are client side installed applications, this runs in a web application and is therefore accessible anywhere in the world – no installation necessary.
- It is a high-tech solution for an often low tech

industry.

Innovations and advantages of the offer

The load optimisation program automates the pallet building planning process. This leads to improved accuracy and efficiency, and reduces costs in the following ways:

- Cuts time to build pallet orders & decreases rejects when crates are not loaded correctly.
- The Pallet Building Plan generated can be used for tracking purposes as the plan provides perfect information on where all the crated products are located in the delivery.
- Removes the need for highly skilled staff

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Abstract

A French company developed computer tools to solve various problems, increasing size and complexity of scientific software, spectacular growth of valorisation projects, multiplicity of the disciplines and competences.

The company is made of computer specialists, scientists and documentation specialists.

Currently, the company develops software acquisition of medical data and helps with medical decision.

technologies: safety exchanges of medical data. A single-stream data exchanged with medical devices.

Current and Potential Domain of Application

E Health

Description

The French company develops a platform for building information systems tailored to the clinical, epidemiological studies, and assistance in medical diagnosis. This platform allows users to properly model their system information themselves, for different types of use. It offers a perfect scalability.

The French company is looking for partner-type small and medium-sized enterprises, developing one of the following technologies: Safety exchanges of medical data. A single-stream data exchanged with medical devices.

Innovations and advantages of the offer

The French company is looking for partners for the following project:

TITLE Information System for Clinical Trial

ACRONYM ISCT

SUMMARY Development of tools for data acquisition in clinical trials, and acquisition of clinical data to facilitate the exchange of information between hospitals and medical research laboratories.

TYPE OF PROJECT (STREP, IP, ...) STREP or IP

PARTNERS INVOLVED: the French company and academic partners conducting clinical research.

PARTNER SOUGHT partner-type small and medium-sized enterprises, developing one of the following

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Abstract

A Danish/Scottish SME has developed a platform for embedded systems which removes the need to express user-interaction logic in languages such as Java. Ideal for embedding in consumers and professional devices with a screen-based user interface, the Platform ensures shorter development cycles, reduced development costs and improved application quality. The company seeks organisations that manufacture or adapt devices that require embedded applications for license or joint venture agreements.

Description

A Danish/Scottish SME has developed an Embedded Platform which runs presentation-neutral user interface logic, written in standard Web languages, to provide efficient and effective user interface management in a wide variety of devices. Consumer and professional devices include those with a screen-based user interface: set-top boxes, printers, photocopiers, data recording and presentation devices.

The Platform manages the binding of a layer of interaction logic defined in Web languages to underlying device functionality and the user interface widget set of choice.

The Platform integrates with Java code, or is used stand-alone. The Platform is simply bound to a company's own user interface elements and widgets and then user interaction logic is declared as standard XHTML, CSS and XForms markup.

Requirements are a Java Virtual Machine and mechanism for user interaction to which the Platform can be bound.

The Platform is ideal for devices with an interactive user interface, especially where there is complex interaction-logic, user data capture, or the graphical presentation of data.

Innovations and advantages of the offer

Innovations - The Platform removes the need to express user-interaction logic in Java. Instead logic is separated from any specific host applications or devices, expressed in high-level, standard Web languages such as XHTML, XForms and CSS.

Advantages - The chief benefits are a shorter development cycle, reduced development costs and improved quality when compared to embedded applications written entirely in Java.

Current and Potential Domain of Application

Consumer and professional devices with a screen-based user interface: set-top boxes, printers, photocopiers, data recording and presentation devices.

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Technologies for provision of expanded real time audio/video/data communication from in service emergency vehicles to remote operations centers

(08 IL 80EP 2RZT)



Abstract

An Israeli engineering SME specialising in introducing innovations in the automotive sector is seeking technologies that will provide expanded real time audio/video/data in the field of emergency vehicles to distribute home base and other in field units. Partners are sought for technological cooperation or joint ventures.

Description

Emergency vehicles (such as ambulances) active in mission critical activity have special operational needs due to the nature of their activity.

1.Safety aspects – these vehicles are more prone to endangering themselves and others than regular vehicles as they travel at high speed, frequently disavowing standard safety regulations and rules of traffic.

2.Information and Communication aspects - availability of real-time robust and high quality audio/visual information and communication is vital to their mission critical objectives, especially where human life or injury is at stake and emergency medical treatment requires real time diagnosis, operation and decision making through interaction between events in the field and remote locations. Optimal deployment and fuel efficiency are also priorities.

Among the company's clients are vehicle manufacturers and Tier 1 automotive suppliers that are in contact with emergency fleet operation/management organisations.

Technical Specifications / Specific technical requirements of the request

State of the Art ICT and sensor technologies are needed in the fields of audio, video, data, artificial intelligence and communication (as well as from other fields) that will enable development of applications to be efficiently and effectively integrated on emergency

vehicle platforms and will increase safety, response time, fleet utilisation and the quality of mission critical decisions.

Some examples may be:

- oTechnology that will enable robust communication in harsh emergency environments
- oIn vehicle Power Line communication
- oLong range and short range audio and image capture, processing and delivery over wireless media.
- oTechnologies in the fields such as data fusion, behavioural analysis, positioning/tracking and asset visibility working in conjunction with .sensor or video data collection networks

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DNA-based lab-on-a-chip devices for the on-site and on-line detection of pathogens in the food and beverage chains (08 IT 53U9 2RY0) 

Abstract

An Italian research Institute involved in studies for the improvement of agro-food products through a multidisciplinary approach, is looking for industrial or academic partners experienced in micro and nanofabrication technologies. The objective of the collaboration is the joint development of a miniaturized integrated detection platform capable of rapid online and on-site detection of pathogens in the beverage and food/feed chains. The institute is interested in technical cooperation agreements.

Description

Over the past several decades there has been a growing need in the development of sensitive, rapid and reliable methods for detecting microorganisms and toxins that taint the food supply, since large-scale manufacture with wide distribution can threaten large populations when a contamination occurs. Besides, sabotage of foods by terrorists and criminals may also happen. However, many of these methods are time-consuming and expensive.

On the other side, in recent years, micro- and nano-fabrication technologies have spread out in a variety of applications as chemical and biochemical tools, commonly referred to as Biomedical or Biological Micro-Electro-Mechanical Systems (BioMEMS). BioMEMS and devices have been used as biosensors for the detection of bacteria, and the resulting biochips, also known as lab-on-a-chip devices, incorporate multiple laboratory processes in a semi-automated, miniaturized format, allowing rapid, sensitive, real-time and low-cost measurements.

An Italian research Institute wants to develop such a truly portable, hand-held device, for the rapid online and on-site detection of pathogens in the beverage and food/feed chains.

The miniaturized integrated detection platform would

incorporate onboard multiple detectors so allowing multiplex assay of various pathogenic microorganisms and/or their toxin genes by application of DNA purification and amplification techniques.

Remarkable advantages are:

- facilitate real-time preventive measures along the whole food/feed/beverage chains,
- detect on time contaminated food/beverage supply, so preventing its dissemination with the possible outbreak of a disease;
- improve and certify quality and safety of Foods and beverages;
- reduce handling, so preventing sample contaminations.

The institute is involved in research activities devoted to:

- improve sensory, nutritional and microbial quality of foods;
- develop novel food products and processes;
- assess risk factors in food production and improve food and feed safety through monitoring and detoxification of contaminants.

It uses a multidisciplinary approach relying on its know-how in chemistry, toxicology, microbiology, biotechnology, veterinary science, agronomy, biology and plant pathology.

In order to develop the new detection platform, cooperation with organizations experienced in micro and nanofabrication technologies is required.

It has to be pointed out the intention to apply for a patent for both the device and the detection protocols.


Technical Specifications / Specific technical requirements of the request

The new kind of device should include:



ELECTRONICS, IT AND TELECOMMS, AGROFOOD INDUSTRY

technology Request

DNA-based lab-on-a-chip devices for the on-site and on-line detection of pathogens in the food and beverage chains (08 IT 53U9 2RY0) 

- Sensor elements reduced to the scale of the target species, so ensuring higher sensitivity.
- Reduced reagent volumes, so cutting the associated costs and time to result.

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