

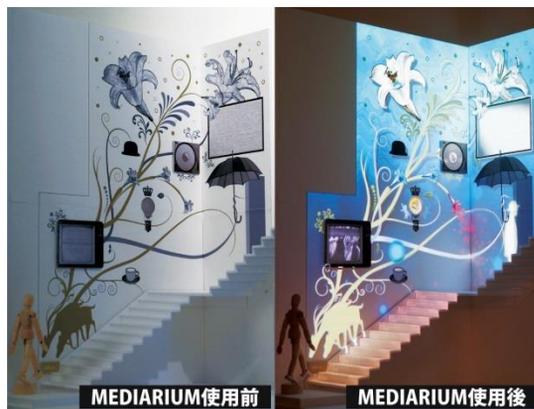
IT Technologies

1. ASHURASCOPE INSTALLATION Co., Ltd.
2. AI, Inc.
3. NAVITIME JAPAN Co., Ltd.
4. Nihon Visual Science, Inc.
5. AIOI-SYSTEMS CO.,LTD.

Ultra realistic-Projection mapping “MEDIARIUM”

【Features】

- Unlike the theater-type of “Projection Mapping”, it generates the video space for everyone to experience.
- By the fusion of different medium, such as architecture, video, music and lighting, it generates a highly realistic space.
- Its technique of multi-angle “Projection Mapping” enables the viewers to see the screen freely from any direction.
- Using the technique of “trompe l’oeil”, it realizes the images with a three-dimensional sense of depth.



【the fusion of graphics and video images】

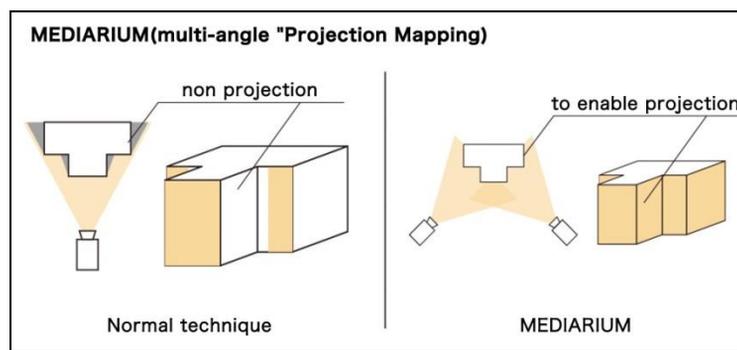
【Effects】

- It can create the contents that suddenly start moving by the fusion of graphics and video images.
- The use of short-focus projectors has made it possible to produce spatial effects even in a limited space.
- With cost reduction, it is expected to be used in all kinds of facilities, in addition to entertainment, such as commercial facilities, public facilities and educational facilities, etc.



【to produce in a limited space】

【The principle of multi-angle “Projection Mapping”】



【using the technique of “trompe l’oeil”】

【Delivery record】

Art museums, exhibition events, store signs, store interior, accommodations and countless others.



ASHURASCOPE®

ASHURASCOPE INSTALLATION Co., Ltd.

Corporate Profile

●Corporate Name	ASHURASCOPE INSTALLATION Co., Ltd.
●Representative Director	Tetsuya AKIBA
●Establishment (year)	2011
●Capital	10,000,000yen
●Number of Employees	3
●Head Office	6-7-22ELPULIMENTOshinjyuku553, Shinjuku, Shinjuku-ku, Tokyo, 160-0022, Japan
	Tel. +81-3-5843-7472
●e-mail	info@projectionmapping.biz
●URL	http://www.projectionmapping.biz/

Business Overview

Based on the method of projecting images in space, Akiba, the representative, proposed "Projection Mapping" more than fifteen years ago.

In 2002, he launched Ashurascope as a Space Design Production and developed "Projection Mapping" by bringing together the skills of space designers and graphic designers.

Following that, he established the "Ashurascope Installation Co., Ltd.", the space design production that used "Projection Mapping" in 2011. He has been engaged in countless projects in collaboration with artists, such projects as the production of store interiors, concerts, events, art museums, MV and stage.

In 2013, he announced "MEDIARIUM", the evolution of "Projection Mapping" with the culmination of its unique technology. He has the ownership of countless technologies that are related to projection, as evident in his acquisition of the patented technology that combined graphics and videos. He is also focusing on the spread of technology and human resource development.

【Portfolio】

《 Ultra-realistic “Projection Mapping” that you can experience in space. 》

■ Unlike the contents of video works, such as movies, which are for "viewing", the contents of ultra-realistic "Projection Mapping" enable the viewers to "experience" in the given space, being "enveloped" as it were, by the images that are projected all around.

■ Unlike the theater-type of "Projection Mapping", it generates a video space for viewers to experience. By fusing different mediums, such as architecture, video, music and lighting, it enables the viewers to experience a highly realistic sense of space.

■ With the images being projected on the walls, the tables, and being reflected on the clothes of the audience, thereby heightening their sense of being entertained, so much so that everyone feels being totally immersed in this experience.



◆FAVETTA(Restaurant)

It is a case example of a restaurant in Shinjuku, Tokyo, which produced space using projection mapping.

We made the latest production using the total of 18 projectors, 2 displays, 14 players and about 100 videos on the entrance, the wall, the hall and the tables.

Using the whole store, We made it with reference to the Italian fairy tale.

《 Amazing production in which pictures start to move. Achieved by the fusion of the contents of the graphics and the video. 》

■ It is possible to give any space a new look by the method of matching the “mapping” with the graphics. It is possible to achieve a production which captures the attention of the viewers and exerts such a strong impact on them that their experience will remain in their memory. Its contents, consisting of video images, could be replaced flexibly.

■ It can be use as artistic contents, as well as for interior space, such as that of a store, for posters and sign boards, etc. By fusing them with various graphics, it is possible to use it as the contents that is bound to be the topics of conversations, contents that could change from what it was before projection to something entirely different after projection.



◆Saitama City Space Theater(Planetarium facility)

We used the patented technology of this company. By making a video on the graphic, the characters are made to work.

Projection mapping is often a white screen to clearly show the image, it has no effect when not projecting. However, by projecting it on a graphic, it can be used as an advertisement or work even when it is not projecting. The possibility of space expands.

【Portfolio】

《 Small "Projection Mapping" that is permanent and is easy to introduce, with no need to consider the size of the space. 》

- Being based on the expertise and skills of building designers, it is possible to achieve an over-all production that takes into consideration the "Projection Mapping" as a three-dimensional structure or interior, corresponding to the implementation site.
- From the perspective of operation, it is suitable for a permanent installation, because it is possible to propose a system which requires no costly, specialized equipment, a system whose operation is also simple. Therefore, you could install one, even if you had once given up on doing so, due to limited space and budget.
- As interior decor, display and signage, the images could be effectively integrated into all kinds of space. To reduce the high costs, no special operators are required to operate it.



◆CASA AfeliZ GINZA(Restaurant)

It is a case example of a restaurant in Ginza, Tokyo, which produced space using projection mapping.

In the entrance, bar, hall, tables, I made video works under the concept of treating the anniversary. By changing the projection method, there is entertainment that guests always feel interesting.

Even if space is limited, we can create a unique space so that we can furnish the interior.

《 Multi-angle "Projection Mapping" that gives the dynamic impact 》

- It is possible to make the contents to have a powerful impact by increasing the projection range. Moreover, by increasing the the number of projectors, you can achieve a production characterized by a powerful sense of immediacy.
- We will enable you to succeed in large-scale projects by letting you benefit from our experience in production and direction under all kinds of conditions, such as the recording of television programs and live events that allow no failure. We work on projects of any length, including short-term events as well as permanent installations, requiring several years to complete.
- We deal in contents that have a sense of scale, achieved by projecting images on walls and on original screens. By projecting images that change dynamically, we attract the attention of a large number of visitors.



◆GLORY 4 TOKYO(Event)

This was a production on a gigantic screen that we implemented for the opening of the mixed martial arts event that was broadcast not only in Japan, but also to 180 countries in the world.

Corresponding to the scale of the venue, we implemented "Projection Mapping" on a screen, measuring 36 m in height and 10 m in width and on three-dimensional objects in all kinds of shapes, that were placed in front that screen.

AITalk® Custom Voice®

【Features】

- Based on a method called corpus-based speech synthesis from individually recorded audio data and not conventional machine sound
- We provide an original voice data base, created from 1~5hours of recorded audio data of the individual
- Enables you to generate natural text-to-speech from the voice data base of an actual individual

【Impact】

- Enables a wide range of use with natural human-like text-to-speech
- Enables text-to-speech with a famous characters voice by text input

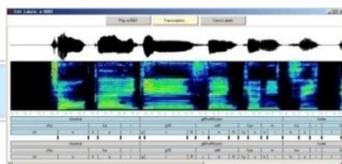
【Principles, Structure, Comparison, etc】

①Voice Recording



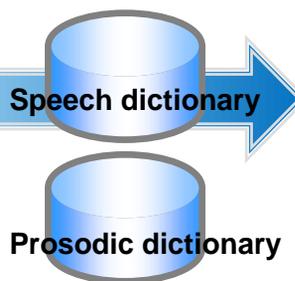
Maximum of 5hours of recording

②Labeling



Labeling recorded audio data into units of phonemes and the creation of a prosodic dictionary, both using our original technique

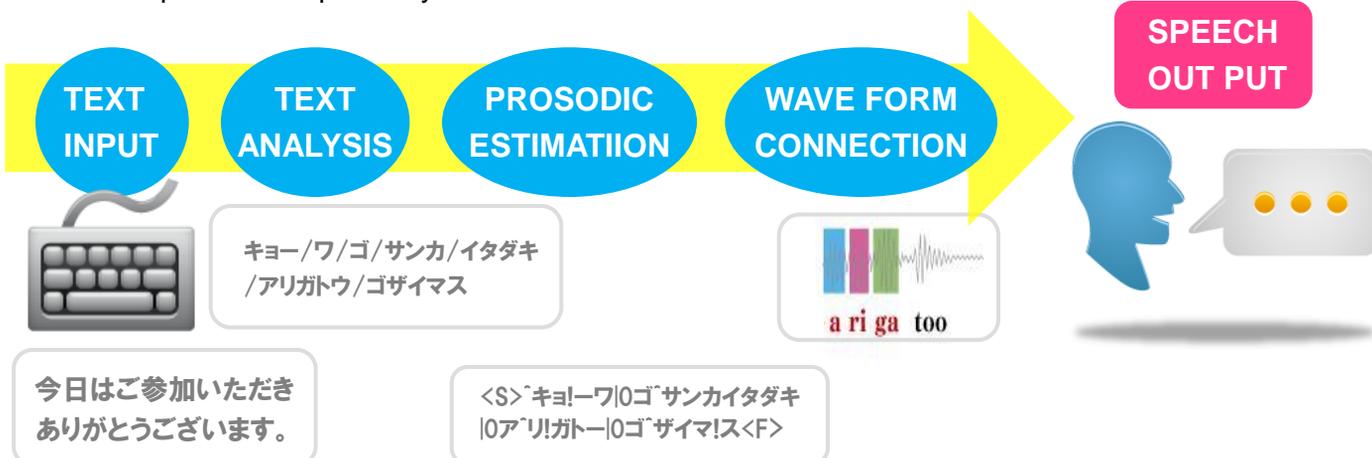
③Create voice data base

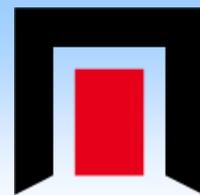


Enables you to provide natural text-to-speech from an original voice data base

【The Speech synthesis flow of AITalk®】

AITalk® (Japanese) is a text-to-speech engine originally developed by AI, Inc. based on a method called corpus-based speech synthesis.





AI, Inc.

Corporate Profile

- Corporate name AI, Inc.
- Representative Director Daisuke YOSHIDA
- Establishment (year) 2003
- Capital 43,801,320yen (Capital Reserve 13,600,000yen)
- Number of Employees 37
- Head Office KDX Kasuga Bldg 10F
1-15-15, Nishikata, Bunkyo-ku, Tokyo
113-0024, Japan
Tel. +81-3-6801-8461
Fax. +81-3-6801-8462
- e-mail info@ai-j.jp
- URL <http://www.ai-j.jp/>

Buisness Overview

We provide and develop voice synthesis systems and consult business related to these systems.

NAVITIME "TotalNAVI®"

NAVITIME "TotalNAVI®"

NAVITIME supports various types of travel activities across Japan.

By setting the destination and desired arrival time, NAVITIME can instantly provide you with routes and departure times. NAVITIME is an all-in-one search that calculates the best route from a combination of transportation methods - including trains, airplanes, cars, buses, and walking.

NAVITIME supports those traveling on foot by providing detailed travel suggestions such as the best train car to take and designating which exit is closest to the destination.

GPS voice navigation is available for pedestrian routes and for car routes (with traffic information).

A well maintained Point-of-Interest (POI) database also enhances travel activities, allowing users to find "where" they want go - not just "how". Some examples of enhanced POIs include restaurants, movies (with timetables), and medical facilities.

Features

- Patented multi-modal navigation technology allows users to search multiple transportation methods in one search.
- Routing considering real time traffic information.
- Suggestions for the best train car / closest exit to the destination.
- CO2 emission data is provided as a deciding factor in addition to the time and cost of travel for each route option.
- You can avoid trains that are overly crowded and travel comfortably by using the train congestion information, or find alternative routes that are less crowded.



Corporate Profile

●Corporate Name	NAVITIME JAPAN Co., Ltd.
●Representative Director	Keisuke Onishi
●Establishment (year)	2000
●Capital	90,000,000yen
●Number of Employees	400 people
●Head Office	Minami Aoyama Tokyu Bldg., 3-8-38 Minami Aoyama, Minato-ku, Tokyo, 107-0062, Japan Tel.+81-3-3402-0701 Fax.+81-3-3402-0858
●e-mail	pr_n@navitime.co.jp
●URL	http://corporate.navitime.co.jp/en/index.html

Business Overview

1. Development and operation of navigation web and application service

Navigation services for feature phone and smartphone users.

2. Navigation route search engine licensing

Developing navigation route search and map drawing engine as a software, and licensing to service providers in library format.

3. Navigation map ASP

Provide navigation features to other service operators through.

4. Business NAVITIME

Utilizing route search technologies to support businesses optimize their transportation activities.

5. Web media LBS portal business

Provide information that is useful and enhances travel experience of navigation service users.

6. Telematics

Providing data and technologies to domestic and global partners in automobile related telematics.

7. Transportation consulting

Support the optimization of transportation infrastructure by providing transportation related data.

8. International services

Develop and provide navigation services for international markets.

9. Inbound Business

Development and operation of services for inbound travelers to Japan.

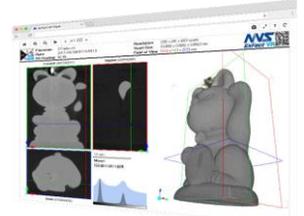
10. Travel Business

Development and operation of travel planning services and sales of flight tickets and hotels.

“ExFact VR 2.1” enables you to redistribute and play 3D images easily.

【Unique features】

- ExFact VR constructs 3D data from continuous tomographic images obtained by 3D-image devices such as X-ray CT scan.
- This utilizes **newly-developed unique technology** which redistributes all information regarding 3D images as versatile and compact files, and displays high-quality images easily. 3D images can now be viewed with browsers, data sharing and web publishing are easy. A new function was added. It became more easy-to-use software.



ExFact VR Player

【Effects】

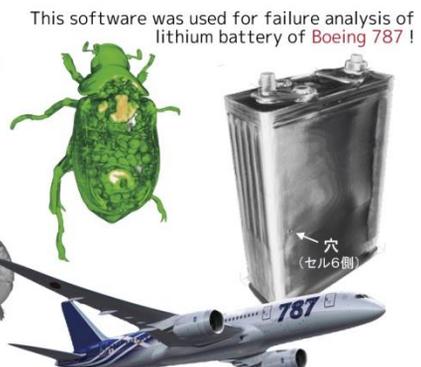
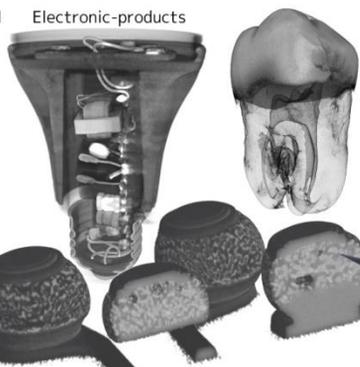
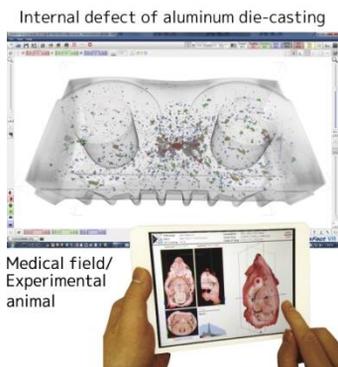
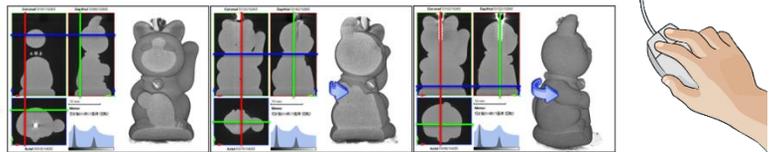
- ① ExFact VR brings about enhancement of saving human power and time of throughput from imaging to data (It used to take as a half day work, but now it takes only 10 minutes.).
- ② **Knowledge** obtained from 3D images will be broadly brought to those who work at manufacturing fields and research technologies on the cutting edge. So, this software will **bring about an effect** that increase signification of high-ended devices and **raise the level of R&D and product quality** in both aspects of industry and academy.
- ③ ExFact VR also brings about **merits to all bases of 3D-image device users.**
 - Faculties operating devices as common utilities, such as public research organizations/universities/ research organizations/hospitals
 - Companies which are given imaging process as business, as well as their customers
 - Those who want to share the result of research and examination and put out the information
 - Users only viewing data

【Principles】

The same principle as a flip book.

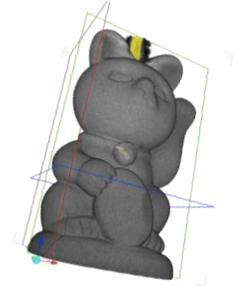


- ◆ ExFact VR loads a set of continual tomographic images obtained from devices such as X-ray CT scans.
- ◆ It draws all of them as CG images in advance and designs them into easily viewable layout
- ◆ It **aligns** them **horizontally and vertically**
- ◆ It stores them compactly in files using **video compression** technology.
- ◆ Without any special software, users **play high-quality 3D images easily with dialogical operations** such as moving a mouse cursor around the scene.



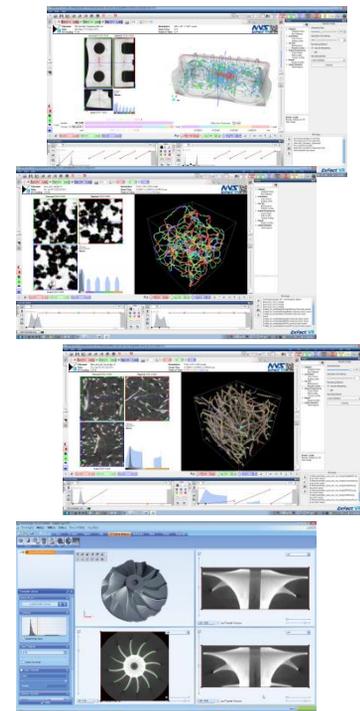
Corporate Profile

●Corporate Name	Nihon Visual Science, Inc.
●Representative Director	Katsuhiko Taki
●Established (year)	1997
●Capital	27,000,000yen
●Number of Employees	10
●Head Office	Coral Bldg.4F, 6-26-2 Shinjuku, Shinjuku-ku, Tokyo, 160-0022, Japan Tel. +81-3-5155-5561 Fax.+81-3-5155-5560
●e-mail	info@nvs.co.jp
●URL	http://www.nvs.co.jp



Business Overview

- (1) Software development and sale focused on the image processing
- (2) System integration
- (3) Research and development of the high technology by the partnership between industry and academia.



2013



The 26th awards for excellent New technology & products by small & medium enterprises



Patent granted No. JP-5582584-B2



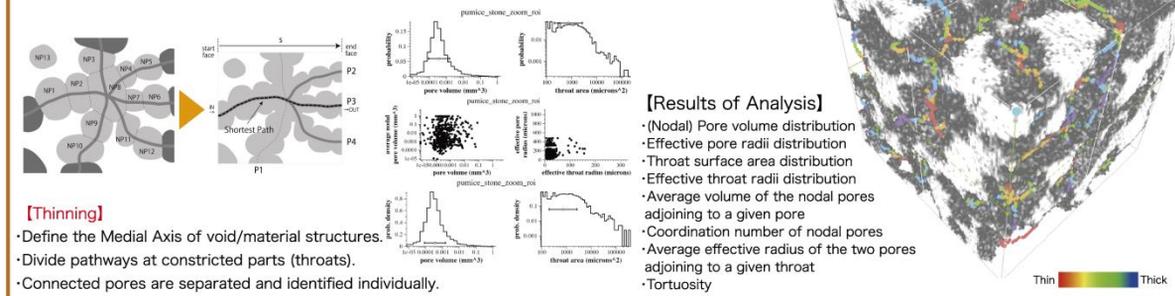
The 13th Courageous Management Awards by the Tokyo Chamber of Commerce and Industry

ExFact[®] Analysis

Software for visualization and analysis of 3D-imaged complex structures

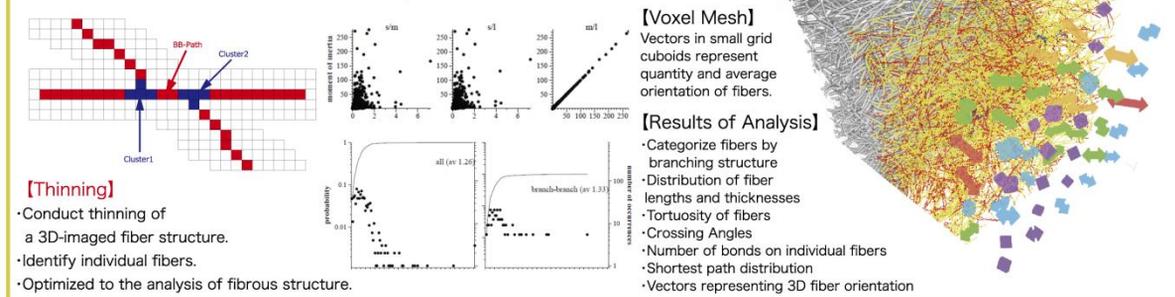
for Porous/Particles

Three-dimensional Analysis of Porous Network Structure



for Fiber

Three-dimensional Analysis of Fiber Structure

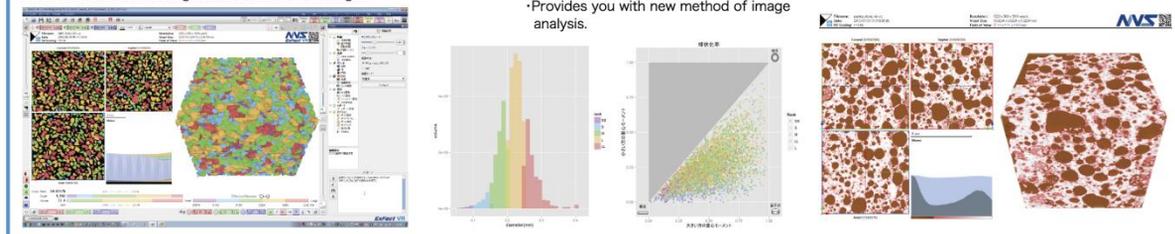


ExFact VR

Visualization and Image Analysis

[Void/Particle analysis option module]

- Detects internal defects and foreign objects inside various materials such as resin and castings based on their 3D images.



[Application fields]

Materials engineering, Chemistry, Energy, Geology, Nuclear energy, Battery materials, Catalysts, Nonwoven fabrics, Ceramics, Resins, Metallic materials, Biomaterials, Rubbers, Carbon fibers, Fibers, Papers, Granules/Composite materials such as concretes



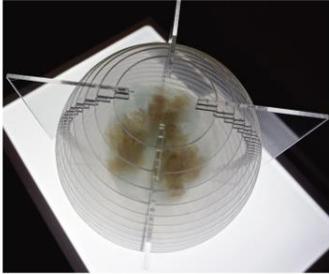
3D layers model by ExFact VR 2.1

The business for producing 3D model from real 3D image



It is a brand name of our new business that produces a variety of 3D model and exhibits which expressed internal structure from 3D image taken by devices such as X-ray CT and FIB SEM. It is possible to have a very impressive presentation with our 3D model which only could be viewed on a computer screen until now.

Produce a "transparent" models and exhibits in a variety ways from color printing with the images processed specially.



Melon



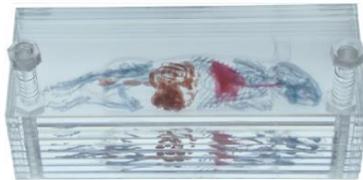
Human body



LED light bulb



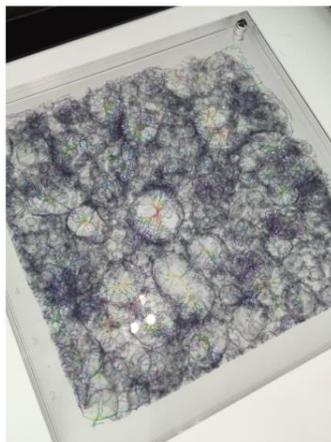
Tarantula



Mouse



Sea bream



Porous network

Our Social Media Channels

Our web shop

NVS.SHOP



Twitter

@NVS3D



Facebook

NVS3D



Instagram

NVS3D



Our blog : <http://nvs.hatenablog.jp> [Japanese]

Visible RFID Tag “Smart Tag”

【Special Features】

Smart Tag is the “Visible RFID Tag” that can store, display and rewrite information.



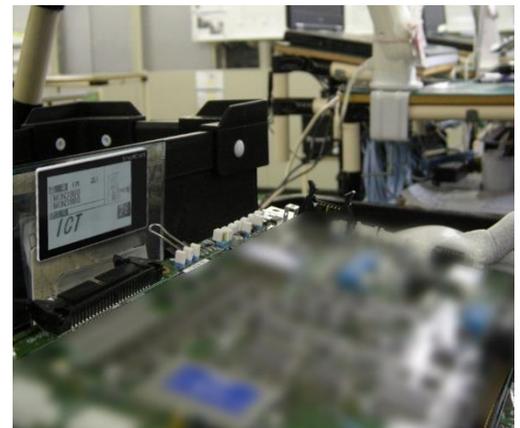
Information in a built-in IC chip can be displayed on e-Paper without a reader. (Latest Smart Card-battery Less)

Power -saving design enables rewriting on 2.0” tags 10,000 times. And the battery-less Smart Card achieves 1,000,000 times rewritable.

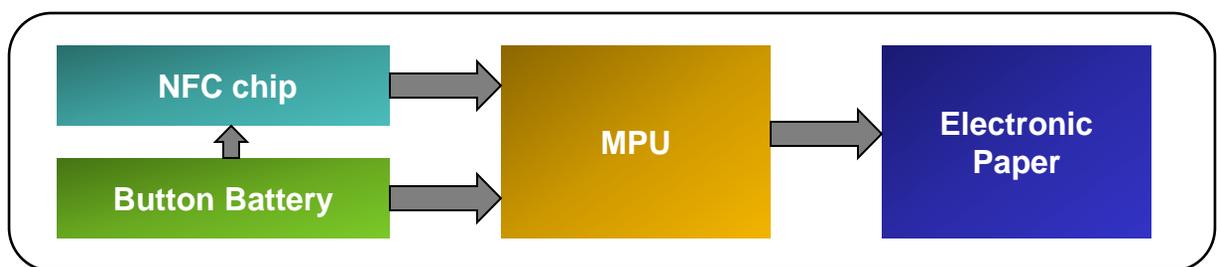
Using Smart phone as a reader/writer helps with communication and its GPS feature can facilitate work.

【Advantages】

- Paperless prevents paper waste and helps protect the environment.
- Not having to print, paste, and peel labels, the operation becomes more efficient and results in cost reduction.
- Easy to display and erase information as required and to control and prevent personal information from being viewed by others.



【Configuration】



Corporate Profile

●Corporate Name	AIOI-SYSTEMS CO.,LTD.
●Representative Director	Kiyoshi Tada
●Establishment (year)	1984
●Capital	123,000,000yen
●Number of Employees	84
●Head Office	WiRA Omori Building. 9F, 1-6-8 Omori Kita, Ota-ku, Tokyo, 143-0016, Japan Tel. +81-3-3764-0228 Fax.+81-3-3764-7520
●e-mail	info@hello-aioi.com
●URL	https://www.hello-aioi.com/en/

Business Overview

Our mission is to make distribution and manufacturing more efficient worldwide.

AI-NET, a world-class product of AIOI-SYSTEMS CO.,LTD. is a reduced wire network system. Its non-polar 2-wire system supports the worldwide manufacture and distribution of goods. AIOI-SYSTEMS will continue to generate new ideas and develop new products to support manufacturing plants and goods distribution systems for our livelihood.

●Pick to Light System



The Pick to Light System is one of the reduced wired products of AI-NET. By using various L-Pick devices, reliable, low cost, and efficient paperless digital picking and assorting systems can be set up easily, resulting in improved productivity and accuracy at logistic centers (DC/TC) and manufacturing plants.

● Projection Picking System®



This system is used to support parts picking operation in the manufacturing and logistics fields. And its image recognition technology is utilized to prevent careless picking errors. AIOI has developed this system to achieve support of picking operation in the environment where shelf drawers/locations are too small for the conventional light modules to be mounted on storage shelves are frequently relocated.

“Smart Tag” Application Cases



1. Container Tag for Distribution to Outlet

Elimination of label printing and compatibility with high-speed scanning for container tags moving on a high-speed conveyor belt help achieve high efficiency and cost reduction.

Over 10,000 tags are used at one distribution center.



2. Work Together with Smart Phone

Smart Tags are used with the GPS function of smart phones for goods distribution/collection control. A smart phone can check the delivery location, confirm delivery, and the return of empty boxes for reuse.



3. Electronic Signboard at Manufacturing Site

At a manufacturing site of an auto parts maker, Smart Tags are used as work instructions and also as an electronic information medium to share production control system information. Thousands of Smart Tags are used at one factory.



4. Entrance Card in Reception/Guide System

Smart Tags are used as security gate ID cards with the visitor's photo prepared at the reception desk. It is also possible to display the location of the visit on the tag.



5. Cleaning Control Log System

In Northern Europe, Smart Tags are used as a cleaning history recording medium in conjunction with a smart phone.

“Smart Tag” Specification

● SC1029L 2.9-inch Smart Card(battery-less)



- 2.9-inch electronic paper (300 x 200 dot)
- Memory: 16K bytes
- Water proof, dust proof IP55 compliant
- External dimensions: 85.6x54x3.2mm
- Weight: 20g
- Number of rewrite: 1,000,000 times
- Near-field contactless communication (NFC)

● SC1029U 2.9-inch Smart Card(battery-less)



- 2.9-inch electronic paper (300 x 200 dot)
- Memory: 16K bytes
- Water proof, dust proof IP55 compliant
- External dimensions: 95.2x60.9x3.95mm
- Weight: 30g
- Number of rewrite: 1,000,000 times
- Near-field contactless communication (NFC)

● ST1020 2.0-inch Smart Tag



- 2.0-inch electronic paper (200 x 96 dot)
- User page: 12 pages / Memory: 3K bytes
- Water proof, dust proof IP55 compliant
- External dimensions: 73x57x8.5mm / Weight: 30g
- Number of rewrite:10,000 times
- Near-field contactless communication (NFC)
- RFID Felica Standard (ISO 18092)
- Communication Distance: 100mm max

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Winners of Tokyo Venture Technology Award

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