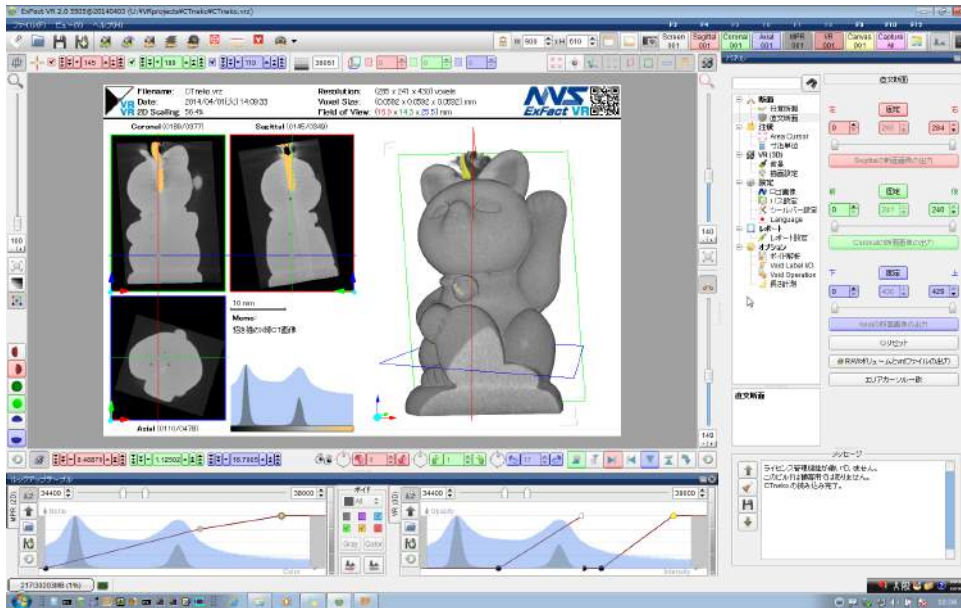


# ExFact® VR 2.0

for Windows

The word "ExFact" is coined as a brand name of our software which presents our fine work of performing 3D image processing. The meaning of "ExFact" holds "Examine and Express the Fact"

The software visualize to 2D/3D by volume rendering technique of tomography data obtained from such as X-rays CT.



**What is Volume Rendering?**  
It is a set of techniques used to visualize data distributed in 3D space by CG (Computer Graphics) technology. It makes to visualize indeterminate shape of data and internal structure of object easily. One of advantage of the techniques is that display data transparently and get natural contrast or shade.

- The advantages of ExFact are...
- ① Built in our original technology "VR-VR technology"
  - ② Make **quick** and **various high quality reproducible compatibility reports automatically** that reduce operation hours of users
  - ③ ExFact is designed as "a tool to use routinely" that has **practical** interface and architecture to oriented users

Carefully designed layout that user understand relationship of 2D, 3D and additional information intuitively. Handle 2D and 3D image independently so can get report as "what you see is what you get" .

**The concept of "Data First" that ExFact VR suggests**

- The software makes redistribution and reproduction of three-dimensional image easily.
- **Overwhelming size of high quality data and information** to compact format and send it to client quickly
- From simply "see" data to "observe and understand" level

Make your client understand 2D/3D image intuitively by sending movie which made by the software. One of purposes of the software is that consider user who not use device like X-ray CT directly so you can expect such user understand image well without using expensive equipment.

Rotate, clip, move cursor, zoom in/out by simple mouse operation  
Anyone observe freely by interactive operation

- A series of slice images to PDF file
- Outstanding readability and compatibility
- Keep detailed information even if zoom in cause of holding original resolution

As a result, reduce the man-hour and has a merit of good software.



Output stl file for 3D printer.

Object from 3D printer

Print out, cut by scissors and assemble it.

- Rotate and/or clip animation and possible to produce as a conventional movie file
- MPEG1 format output, has both merit of reproducible compatibility and quality
- Attach and play on MS PowerPoint

**Visualization and examples of applications**

Void analysis of aluminium die-casting    Microstructure of resin and metal    electronic product

Analyzed by Void/Particle analysis option module. (sold separately)

This product was used for the failure analysis of lithium-ion battery in Boeing 787!

# VR-VR technology<sup>®</sup>

VR-VR Technology

It is our original technology that archive huge 3D images data in compact package and distribute to third party easily.



Patent granted  
No. JP-5582584-82



TOKYO  
VENTURE TECHNOLOGY  
AWARD  
2013

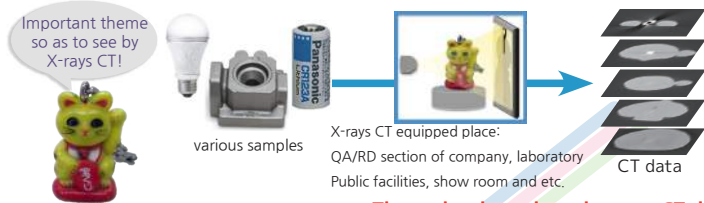


The 26th  
awards for excellent new  
technologies & products  
by small & medium  
enterprises

## Our original technology 「Virtual Realistic Volume Rendering」 (\* Virtual Reality)

Common  
demand

- Send 3D data to client in advance and want use it at meeting or presentation
- Want to offer 3D data to customer which is demanded taking by X-ray CT...
- In that case, don't know where and how to observe data...
- Want to observe data without deep knowledge or exclusive software...
- Want to reduce time and man power of software processing work...



**The technology that observes CT data freely and redistribute is necessary!**

### To various places

Observe on PC of one's desk apart from a device, at meeting or presentation

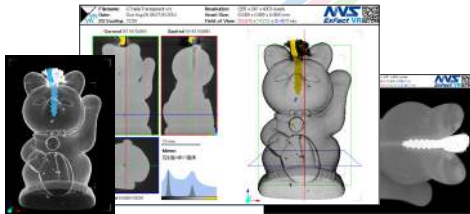
### To various partners

Co-worker/boss, other posts (design/production section), a business partner, a client of requesting CT data, co-researcher



## The flow of VR-VR technology process

### ① Import 3D data set on ExFact VR

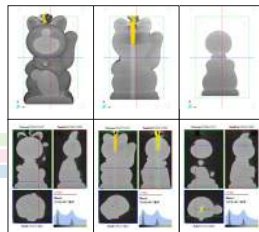


### ② Decide screen display and layout freely

### ③ Easy to set color and contrast

Large capacity disk is necessary cause of producing intermediate files. Approximately around 5-10GB is required. It will be deleted after processed.

### ④ Render quickly a large quantity of 2D/3D images automatically



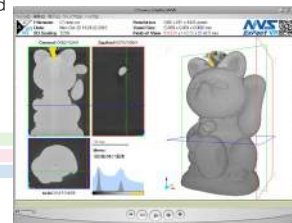
Processing time is vary depends on PC specification. In general, it takes about 10 - 20 minutes per VRVR file. In processing, can do other jobs are possible.

### ⑤ Encode (compress) high quality data in compact size Making movie at here is called VRVR format particularly.



VRVR file  
CTnekoVRVR.mov

### ⑥ Play and operate on Apple QuickTime Player 7



The same principle as a flip book.



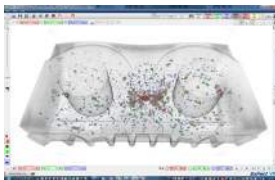
It depends on data size and resolution though: output of VRVR file size is about 10s - 100s MB which can copy USB drive or CD-R. This format holds several thousand of images in general.

Download Player is free. High performance PC is not required to play. Manual for how to play on before Windows 2000 and Macintosh is prepared in English, Chinese, Japanese and Korean.

## Option (sold separately)

### Void/Particle analysis option module

Extract internal defect and particle of 3D images automatically from the data kind of casting product or the resin. Visualize by displaying in color. Of course the result can be produced as VRVR file



### Image Instrumentation option module

This new function enables you to approximate brightness distribution to normal distribution, and to evaluate and analyze data. This unique function also enables you to bring data using threshold setting and coloring function into statistical analysis related to all volume data, which used to be done inaccurately.



## Working Environment

- Support multiprocessor/multi-core CPU
- Recommended the CPU after Sandy Bridge of Intel, which supports the AVX Instruction Set (second generation Core processor)
- Support most of the PCs released since 2011
- The graphic card which support 3D and OpenGL performance and has independent GPU and video memory is required such as NVIDIA GeForce, Quadro series
- If work on notebook PC, required high performance for above reason
- Windows 7, 8 Edition 64bit
- Recommended several-fold memory (RAM) of total data size  
Required 8GB on 64bit minimum
- High resolution monitor, UXGA (1600 × 1200pixels) required
- Recommended full HD (1920 × 1080pixels), support multi monitor
- Required install QuickTime 7
- Work on QuickTime Pro also OK (not free)
- USB port (protection module connection use)



QuickTime is technology of Apple Inc.

## 64bit Workstation

We also offer desktop PC which optimized for the software. By customer request, sell the software and PC as set.

Display outstanding quality for grayscale rendering Grade 2 monitor for medical imaging

Hardware Built in RAID unit



## Support

Hold software training course regularly every month at our company (Shinjuku, Tokyo)  
Our experienced engineer lectures actual technique of using software carefully. Not only training but also you will learn knowledge about X-rays CT, general imaging processing technique, reverse engineering and etc. We try to help you to use at work promptly after training.



## License Form

- Program works with connected protect module called dongle to USB port
- Use software on any PC if dongle is connected
- Not necessary to install dongle driver
- Part of dongle memory area recognized as drive; software installer and sample data are included

- High end video card support high speed rendering
- Built in SSD (RAID0) support fast read/write intermediate files
- Three years guarantee (in Japan only)

IMAGiNE PC Vintage is trade mark of customized PC. It is produced by cooperation of our company and Japan Computing System Inc.



Specification and release time may change without notice. Company and product name are registration of trademark.

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