

Ultra high resolution and high-speed image browsing system

*amateras*



*tsi*

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# What is *amateras*?

- ❖ Amateras is a system optimized for the display of high resolution large digital (20GB and higher) files of Cultural Heritage

Amateras includes a data-base management system and allows digital joining of large files



## Specific Features of *amateras*

- ❖ Displays scientific information and contents of cultural heritage and libraries
- ❖ Optimized file conversion and display system
- ❖ Able to join large files obtained from high resolution scanners and cameras
- ❖ Capable of being used on most available PCs and high resolution displays, including full high vision displays(1920x1080 pixel) or (2560x1600 pixel) monitors
- ❖ Dynamic display using touch panels
- ❖ An ideal display system for museum exhibitions

*With these features, amateras is an ideal system for cultural heritage and display end stations in museums.*



# Technical Concept

- ❖ Handling of high resolution large digital files
  - The large files are “layered” into multi-resolution divisions
  - Security decoding of the files, freezing and management of the files to increase the speed of manipulation
  - Generation and replay of dynamic content
  - Capable of producing automatic display (zooming and scrolling) of multiple images
  - Voice and texts can be added to images
  - Remote control and handling of the sequence of images
  
- ❖ Extremely high security system
  - Protecting the rights of the holders of cultural heritage
  - Data-base management system based on museum display technology and Know-how



# System constituent

- ❖ Large digital files display system
  - Image Browsing application
  - Image digital file management system
  - Image conversation tools
  - Image processing tools
- ❖ Image security system
- ❖ Digital heritage data base management system

# Amateras using scene



Overview



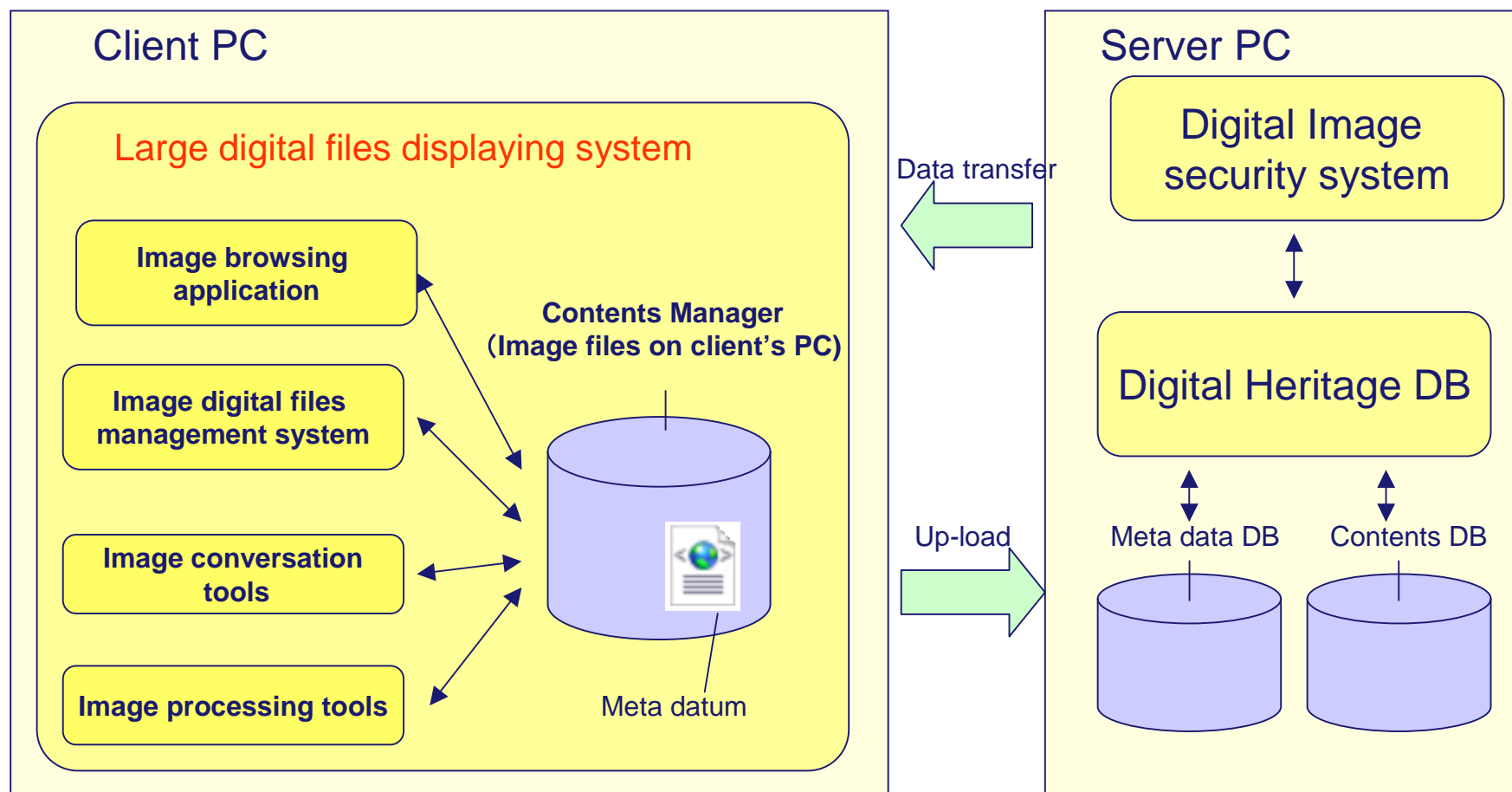
Original size



More zooming up



# Function relations





# Browser Applications

- ❖ Smooth and Speedy Browsing large Image file
- ❖ Visceral handling by touch panel(zoom in, zoom out, scroll)
- ❖ Main functions
  - Image browsing application
  - Image catalog application
  - Meta data viewing application
  - Loupe application
  - end-measuring application
  - HTML contents viewing application and so on



# Image management application

- ❖ Metadata Image Editing and management
  - Metadata editing
  - Image catalog viewing management
  - Image delete and recovery
  - Import and export (Excel XML)
  - Backup and Restore



# Image Conversion Tool

- ❖ Conversion Large 24bit RGB-TIFF image to browsing image data
- ❖ 1 to 3 minutes to convert a image file
- ❖ Hot folder check application
  - Automated and continuous conversion image files in hot folder
- ❖ Other applications :
  - Auto numbering and conversion application
  - Scaling application
  - half-turn image application



# Image Processing Tool

## ❖ Conjoining Image files

- Automatically fit position of many image files and conjoint them and make one image file
- Invisible seam of image files

## ❖ Other features

- Trimming
- Scaling
- Turning



# Image Security System (developing)

- ❖ Framework for secure image management system
- ❖ Dispersed authentication scheme with public key cryptosystem and digital certificate service
- ❖ Digital Copyright management with XrML



# Culture Heritage data-base management system (developing)

- ❖ Remote framework for image data-base, storage and deliver
- ❖ Secure image management with security system
- ❖ Extensive data-base on cross multi domains



# Service Concept

- ❖ Improving heritage to Digital archives
  - Super High quality digital archives
- ❖ Intellectual contents creating supporting business
  - Making Secure and attractive digital contents are merit for Contents holders and visitors
- ❖ Low cost digital archives
  - Medium and small organization can introduce amateras with low price (browsing system 1,000,000yen~)

# Digital Archive Management System

- ❖ This exhibition system is very useful for museum curators to manage and edit digital archives.



# Exhibition System

- ❖ The exhibition system allows visitors to feel and touch cultural heritage with touch panel.





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