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iBase Trinity - digital asset management and multimedia online library

Section map : [Features Guide](#) - [Outline](#) - [Summary](#) - **Details**

1. Capacity & storage

iBase systems are fully scalable, there is no inherent limit to the number of records that can be created for a picture library or digital media asset management system. Any limitation will be with the hardware on which the system is installed, and is most likely to concern the amount of file storage space available. See [calculating storage space](#) requirements.

2. Optional features

Trinity can be configured to requirements. Here are some examples of optional features:

- User login / registration and administration.
- Image download - including size / quality of downloadable version.
- E-mail an image or other asset file, or a link to the web page.
- My folders or Lightboxes with which registered users can save links to any images they might want to research again at a subsequent visit.
- Download authorisation by an administrator.
- Image ordering and e-commerce.
- Audit history of orders / downloads.
- Larger web resolution images.
- User feedback on individual items.
- Site feedback.
- Rotating images on the home page.
- Advanced search using any required metadata.
- Hierarchical subject search.
- A to Z index search.

3. Google indexing

iBase Trinity is designed to enable search engines, like Google, to index each record and to be able to recognise groupings or collections of records.

4. Configurable database

You start with a clean sheet, nothing is imposed. Choosing field types for text; number; logical yes/no; date; and memo - you build the metadata structure that you want, with as many fields as you need and pick-lists as required to validate input and ensure data integrity. The field labels (aliases) seen by users are entirely customizable.

- Relational and configurable database structure.
- Multiple types of item (each with its own set of fields within a single database). See [Metadata for different types of things](#).
- Field aliases or labels can be whatever you want.
- New fields can be added.
- Fields can be deleted.
- Create parent / child / peer [relationships](#) between records.*
- Choose which fields can be seen by web or intranet users.

Note: iBase will do all of this for you if you wish, as part of our implementation service.

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Metadata for different types of things

Whilst it is often possible to apply the same metadata structure and field labels to a variety of item types, such as an oil painting, a photograph, pottery etc..., there will be occasions when such an approach is insufficiently flexible. There may simply be just too many differences between some of your types for the viable use of the same metadata fields for each, especially if you need to describe each item in considerable depth.

For example, trying to use the same metadata structure for in-depth cataloguing of both scenic water colours and textile machinery might prove too challenging.

iBase deals with the requirement for in-depth cataloguing - or for that matter any other circumstance where a number of individual and unique metadata fields are needed within the overall database - by enabling, within a single overall database, the creation of a unique set of fields and labels for each type of item that requires it.

Having said all this, if only summary metadata is being written there is usually no need to cater for different item types with their own unique sets of metadata fields. It may be possible to use a single database structure and field labels that will work for just about any type of item. For example, the label 'Creator' can be used for an artist's name, or the name of the manufacturer of an item, or a photographer's name, and so on.

As a general principle we recommend keeping things as simple as possible without compromising your objectives.

* Depending on requirements it might be that the iBase Manager interface is the best or preferred option. See Other Products

5. Multiple source databases

As many separate and completely independent source databases as are required can be created. All of the features described here are applied to each independently, and will have their own user logins and permissions, their own data forms and workspaces etc...

Multiple Web / intranet destinations

From a single source database records and assets can be published independently to any number of separate web or intranet sites. For example, you might have an internal iBase Trinity on your intranet to which all of your images or other digital assets are available with all of the metadata, and a public web site on which you want to present a sub-set of the records, perhaps with only some of the metadata fields on view.

One of the Trinity sites could be for a public access kiosk in a gallery or museum. At one time such systems had to be specially designed with extremely simple touch screen interfaces suitable for people with no experience with a mouse or keyboard. However, nowadays it is rare that potential users of a kiosk do not have sufficient skill with a mouse and keyboard. There are two significant advantages of this circumstance:

1. Users are not necessarily limited to only basic functionality, such as would be available from a touch-screen or similar interface without a keyboard.
2. Where an organisation requires a website providing essentially the same features as a kiosk, it is not only possible but also highly cost effective to use the same software for both requirements. Any differences between the web system and the kiosk can be accommodated by configuration.

Not only is this approach very cost effective for initial implementation, but of course it also means that any changes made for one application will, if required, also be available to the other at no additional cost.

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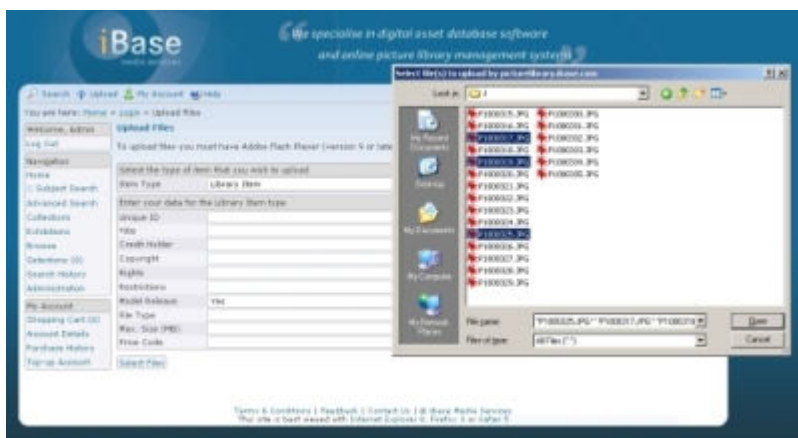
6. Asset file types

Digital assets can be any that has a standard MIME type, including images, video and sound files, PDF's etc... There is a list of MIME type and file extensions at <http://www.mimetypes.org/>

7. Uploading

There are many ways in which images or other digital assets be added to the database:

- Upload singly or in bulk.
- Drag and drop from a local or networked drive.
- Directly from a scanner, camera or any other **TWAIN compatible** device.



The iBase Trinity upload form can be configured:

- to display any of the fields available in the database schema.
- for entries to be mandatory in any or all of the fields.
- to include picklists for control of terms and vocabulary.

Upload policy options

Optional settings when images are being uploaded:

- Thumbnail and preview images are automatically created.
- Any number of surrogate images of any size can be created automatically, according to the import policy used.
- Import policies determine the behaviour of the import and the characteristics of any surrogates required. As many import policies can be set up and saved as are required. Here is one example.
- iBase systems maintain **ICC colour profile** information throughout all processes, enabling consistency of colour across a variety of output devices.
- Additional appended records can be created, or existing images or other digital assets can be overwritten.
- Images can be automatically assigned to existing data using specified fields or relationships.

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Uploading metadata

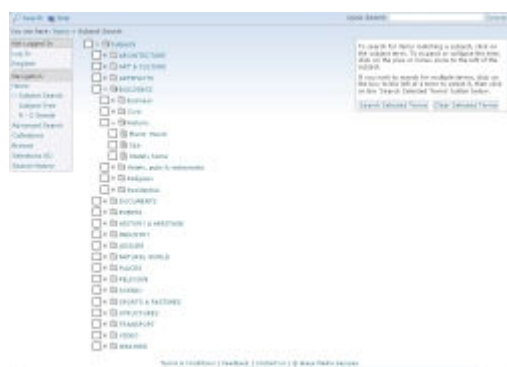
- Read IPTC metadata from within the image file.
- Read EXIF metadata from within the image file.
- Read XMP data.
- Write IPTC metadata into image file.
- Edit EXIF metadata.
- Write XMP data.
- An audit trail of who did what and when.

When you import data you can specify options which determine how it is handled:

- Map fields in imported data source to existing fields in the database.
- Embedded metadata (EXIF,IPTC,XMP) mapped to specified data fields.

8. Keyword / Tag / Subject hierarchy

Keywords - which might also be called tags, subjects, categories etc... - can be created and nested, with as many nested sub-levels as required.



Here's a section of the subject hierarchy, as seen in the Manager interface, used for the iBase demonstration picture library.

Exactly the same hierarchy will be seen on Net 6 as shown here on the [iBase demonstration picture library](#).

Relationships

Relationships can be created between items - for example a parent / child to associate related images to a master record, maybe for multiple aspects of a single 3D object, pages of a book, and so on.

[Here's](#) an example of multiple aspects of a 3D object.

There's a single master image which is the one that will be seen when a search returns the item on Trinity, with additional views of the same object being available as related items.

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9. Collections

Another way in which relationships can be used is to create collections of records which can be seen with a single click on the website. Each record can belong to as many collections as are required, and there is no limit to the number of collections that can be created.



For example, this shows that an image in the demonstration picture library belongs to two collections, named 'Views of iBase's home town of Ikley' and 'Pictures of trains - some old, some new'.

The same thing can be seen [here](#) on the Trinity demonstration site.

These collections - which might be called exhibitions, highlights, best sellers etc - can be grouped together on like [this](#).

Clicking one of the thumbs will open a [header record for the collection](#), presenting a summary of what the collection is about, and a link to the images or items it contains.

There are many other ways in which the powerful relationship building capability of the iBase database model can be used.

Rotating images / collections on the home page

The home page can contain whatever you want - for example just text with some static images or graphics, or to make it a bit more dynamic you can have rotating images or some of your collections / highlights / exhibitions - or indeed both

Rotating images can be drawn from the entire database, or from any subset you choose for them. Here is an example of rotating images on Shetland Museum's site.



Click the thumbnail to view then press F5 to refresh the Shetland home page.

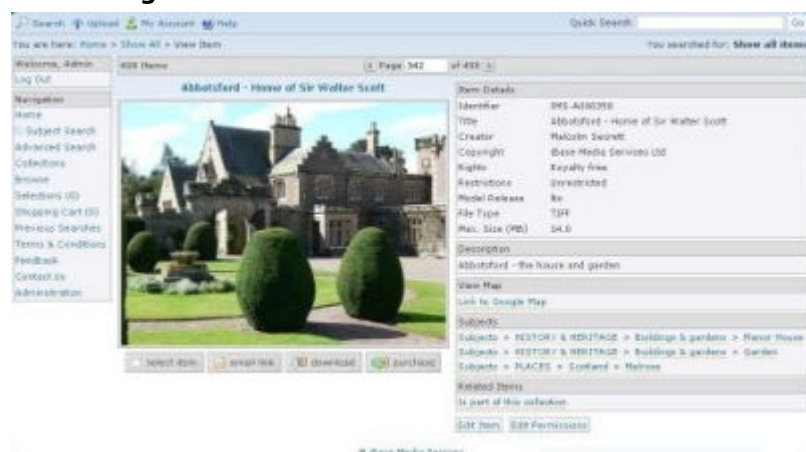
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Collections / highlights / exhibitions can be set to appear on the home page in whatever order you want.

Our own [demonstration picture library](#) includes collections on the home page, as do for example Edinburgh City Libraries - click thumb right - and many of those you can see on the [examples page](#) of client's sites.

10. Editing metadata



Metadata editing can be carried out by users who have the appropriate permissions. When viewing an item page they have an edit button which, when clicked, allows them to edit the available fields.

11. Searching data

The typical data search features can be seen at these links - [subjects](#), [indexes](#) and [advanced](#).

There are also Show All and Quick search facilities. Boolean and Fuzzy operators can be used for Quick Search, as described in the [search help](#) page of the demonstration picture library.

A refine search feature enables 'search within a search' - that is - searching only within those records returned by the previous search.

Single click searching is available on a collection or group of images. These collections, which might be called exhibitions, highlights, best sellers etc... can be grouped together, and if required some can be displayed on the home page like [this](#), clicking one of the thumbs will return all of the images in the collection.

All searches are stored in a history for the duration of the user's session, and can be retrieved with a single click.

See also [federated searching](#)

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12. Federated Searching

A federated search is the simultaneous searching of multiple online databases, with the facility to see a list of returns from each source with clickable links that will connect directly to the source database.

From the perspective of an organisation who want to make their database available for federated searches, they need to be able to expose selected data to the outside world in a way that can be interrogated by a federated search engine.

iBase have a proprietary off the shelf solution for this – here is more detail about enabling an iBase database for [federated searches and a live example](#) of searching via an iBase REST server.

13. Branding - look and feel

The Trinity interface can be branded to your requirements or to match existing web or intranet pages:

- Home page banner, colours, text, images and menu bar labels customisable within standard layout constraints. Some examples of the different look and feel provided to customers' specifications can be seen on the [examples](#) page.
- Position of quick / word search.
- Multi-media capability, e.g. sound and video files.
- Collections, electronic exhibitions, best seller's gallery etc...
- Fields from the source database to be included on a web or intranet site.
- Additional text pages.
- Watermarking requirements - if any.
- Footer links either within the site or to external locations.

Rotating images / collections on the home page

The home page can contain whatever you want - for example just text with some static images or graphics, or to make it a bit more dynamic you can have rotating images or some of your collections / highlights / exhibitions - or indeed both

Rotating images can be drawn from the entire database, or from any subset you choose for them. Here is an example of rotating images on Shetland Museum's site.



Click the thumbnail to view then press F5 to refresh the Shetland home page.



Collections / highlights / exhibitions can be set to appear on the home page in whatever order you want.

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Our own [demonstration picture library](#) includes collections on the home page, as do for example Edinburgh City Libraries - click thumb right - and many of those you can see on the [examples page](#) of client's sites.

14. End user search interfaces

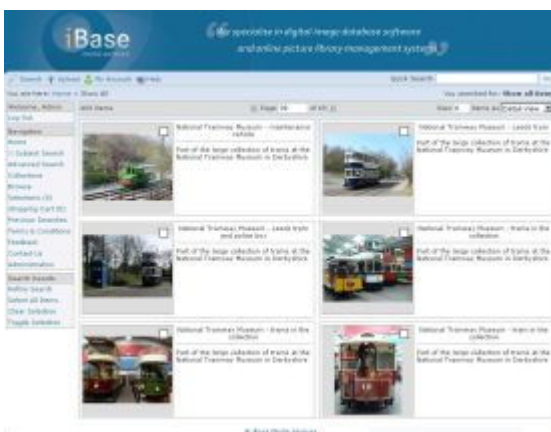
The main pages for end users are the *thumbnail gallery* and the *item details* pages.

Thumbnail galleries - are used to display all search returns.

If the item is not an image the thumb gallery will display a graphic of your choice representing the type of asset, for example video, audio, Word document, a PDF etc...



The user can select whether to display in 'Thumb View' or 'Detail View' - which has more text displayed with it. They can also select how many items are displayed on each page.



Forward and backward page navigation is available, and 'go to' a specified page number.

The default view - thumb or detail - and number of items per page are system configuration options.

Item details pages - clicking on a thumbnail displays an item details page.

If the item not an image, a graphic of your choice is displayed representing the type of asset, for example video, audio, Word document, a PDF etc...

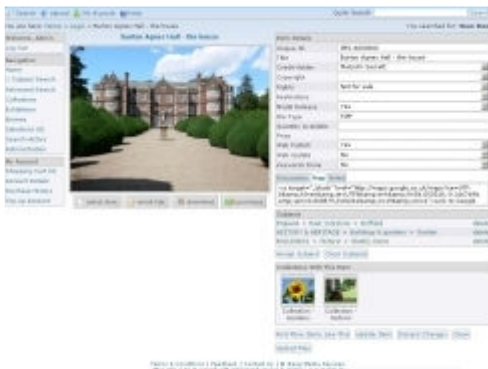
This illustration shows the information and options available on an item details page. Note that everything is configurable - an option will not be included in the configuration if not required.

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- The metadata displayed can be any or all that is available.
- The layout of the metadata is a system configurable option.
- Subjects / keywords / tags can be displayed.
- Related items - perhaps part of a collection or multiple views of a three dimensional object.
- Fields embedded with HTML.
- Display a larger image.
- Select the item (for a lightbox, ordering etc...)
- Email a link to the page.
- Download the image or other asset file.

15. Displaying embedded HTML



Embedded HTML can be included in data fields for any purpose. In the screen shot on the right you'll see the HTML for a link to Google maps specifically for the image portrayed by the record.



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This appears as an ordinary link on the Trinity end user interface - see the Google map link in the iBase demonstration picture library by clicking on the image to the left.

16. Watermarking

- Images can be watermarked with text or a graphic at any size and in whatever position on the image is required.
- Watermarks can be applied to specified resolutions, for example none on the thumbnail or reference images but included on any higher resolutions.
- Having watermarks on display images doesn't mean that download versions have to have to have them, but they can if required.

17. Asset requests

Organisations may wish to make some or all of their images or other assets available only to internal users, or perhaps also to external agencies who are doing work for them.

In these cases access to Trinity will be controlled by a mandatory login and password if it is available on the web, or if on an internal network (intranet) perhaps by validating users' normal network credentials without the need for them to sign in again. The LDAP protocol is a version of this.

In some circumstances, once a user's login credentials have been validated an organisation might permit download of high resolution versions of the images without a requirement for further authorisation. Alternatively images can be selected by the user in the normal way and an email request sent to an administrator for review and authorisation. On authorisation by the administrator an email is sent to the user with a download link URL, with which they can directly download the authorised images.

18. Online ordering and E-commerce

Trinity has an extremely flexible ordering module, which can be tailored to your specific requirements. These may range from a simple "image request" system, through to full e-commerce, with credit card authorisation or on-account payment, and digital fulfilment. Order information can be exported for use within a third-party accounts or inventory system if required. Users also have full access to their order history. The basic elements available include -

- *Shopping basket* - a means of collecting images together, e.g. Shopping Basket, My Selections.
- *E-mail request* - the selects images and clicks a 'Purchase' button, which opens a window requesting the purchaser's details, then sends an e-mail listing the images required to the host organisation and copied to the purchaser. The host organisation fulfils the order in whichever way they choose. The request system is configurable.
- *Pricing details*- can be a simple text statement of a pricing structure, or a dynamic pricing structure customised to the vendor's requirements.
- *Financial transactions* - Some organisations prefer to send invoices to their customers, others like to offer on-line payments or indeed make it the only option.
- *Order fulfilment by download* - on completion of a financial transaction - whether using E-Commerce or administrator authorisation, download images of a higher resolution than are viewable on the web site. The storage location of these higher resolution images can be anywhere that is accessible from the Internet. If iBase Media Services are providing hosting they can also offer storage of these images.

Ordering and e-commerce configuration options.

A system manager can create as required -

- Media types e.g. digital, print etc...

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- Media sizes e.g. digital file sizes, print sizes etc...
- Types of use e.g. commercial, personal, educational etc...
- Delivery options e.g. e-mail, download, mail etc...
- A pricing structure for each of these options independently.
- A separate tax code, or none, for every country.

This page - click for a larger version - shows two items in the shopping cart - one where payment will be required and another for which no payment will be required.



Note: iBase will only supply on-line financial transaction systems that use recognised and regulated suppliers of on-line banking. This might be a company such as NetBanx, Worldpay or PayPal, or it might be the organisation's own secure online trading system. The system provides a connection to an on-line banking supplier, and it is their secure system that accepts the price to pay from iBase Net, and whatever card and personal details are required from the purchaser. Thus the card and personal details required by the payment system are not held within iBase systems.

19. User feedback



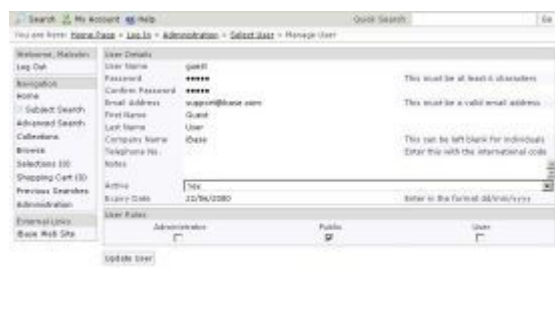
A users' feedback button can be included on the item details page, enabling comments on specific items to be emailed.



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20. Access control and user permissions

Extensive control is available for the access rights and permissions of Trinity users, including:



The screenshot shows the 'User Details' form for a user named 'Guest'. The form includes fields for User Name, Password, Confirm Password, Email address, First Name, Last Name, Company Name, Telephone No., and Notes. There are also fields for Active status and Expiry Date. At the bottom, there are checkboxes for 'Admin', 'Public', and 'User' permissions, with 'Admin' and 'Public' currently checked.

- Login and password managed access to the site.
- Set expiry dates for logins.
- Limit access to part of the database for specified users.
- Make some assets available to internal users only.



The screenshot shows the 'Page Permissions' form for a user named 'Guest'. The form includes fields for Page Name, Display Name, and Description. Below these fields is a table with columns for 'View Page' and 'Edit Page' permissions for different user roles.

Page Permissions	View Page	Edit Page
Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
User	<input type="checkbox"/>	<input type="checkbox"/>
Public	<input type="checkbox"/>	<input type="checkbox"/>
Everyone	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Manage user permissions for view only, download etc... as required.
- Publish all or selected assets only to the web.
- Create personal lightboxes or share them with other users.

21. Audit trail

A permanent audit trail can be maintained from which any required reports can be created. The standard Trinity reports are:

- Audit events between :startdate and :enddate
- Most popular search term(s)
- Order history between :startdate and :enddate
- Request history between :startdate and :enddate
- Search history - All users between :startdate and :enddate
- Search history - by registered user (:username) between :startdate and :enddate
- Zero result searches

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Other configuration specific reports can be created as required

22. I.T. Environment

Trinity can be deployed with a single database, or with separate source and destination databases if multiple web or intranet sites are required. iBase Media Services will look after all deployment matters for you.

More detail about these options is in the Trinity [technical section](#).

23. Language

iBase Trinity will be delivered with English language menus, navigations bars, messages etc. Data can be entered in any language that uses the standard Latin-1 character set (ISO ISO-8895-1).

Additional pages supplied and managed by our client can be in any language.

24. Working with videos

Whether you're using cloud digital asset management or an internal network configuration, videos and the associated technical video metadata can be uploaded and viewed via your web browser.

During the upload process the original video file is stored, but a streaming version is also created by converting the original to both Flash and HTML5 formats. If a web browser is detected that supports HTML5 then iBase Trinity will try to stream this version first. However, if the web browser doesn't support HTML5 then iBase Trinity will automatically fall back and try to stream the Flash version. This ensures that our digital content management systems can rapidly stream the highest quality video to as many web browsers as possible.

Other video settings such as video bitrate and video resolution can also be very easily configured using the browser interface - 1080p High Definition (HD) video is supported.

If for example, your goal is setting up a Digital Brand Management system then it's straightforward to upload MP4 files which would be converted during upload according to the bitrate and resolution settings that you specify.

25. Sharing Digital Media on social networks

Access your Digital Asset Management system by logging in using your Facebook account. Easily share digital media from your video library on social networks - Facebook, Twitter, Stumbleupon, Blogger, Google+ and Reddit are all supported.