CG4.1 Analysis

# Background and identification of problem

## Introduction

My client is a well-known local artist and family friend named Frank Jennings. Frank is based in Hampshire. A recent article in Hampshire Life magazine describes him: <http://www.hampshire-life.co.uk/out-about/boxing_clever_with_frank_jennings_deceptive_receptacles_1_2992356>.

Frank started making box art assemblages in 1973 while studying for a Fine Art degree at Leeds Polytechnic. He moved to Hampshire in 1983 to take a full time job lecturing at South Downs College where he became Head of the Art Department. He retired from here in 2008. Since retiring he has concentrated full time on his art work and exhibitions. He estimates that he has created around 300-400 pieces over the last 40 years, many of which are now in private collections.

When Frank originally commissioned his website he had almost zero knowledge of the internet and was poorly guided by his supplier. The result is a website that is almost impossible to manage and to navigate and from which he receives almost zero visits. As a result, he is looking for both: a new website, and also, a website ‘content management system’ (CMS).

Some of the problems with the current website are:

No content management system – to get changes made he has to send written instructions to his supplier. These are often misinterpreted and take some days to complete. Frank is not satisfied with the service provided by the current developers.

Website is not very accessible - it is only accessible in flash and is unclear what is going on.

Some essential functionality is missing.

\*\* THIS COURSEWORK ONLY COVERS THE CONTENT MANAGEMENT SYSTEM NOT THE WEBSITE \*\*

Frank would like to be able to update the content (as well as blog updates, exhibitions etc.) himself.

It takes him around a month to make a new assemblage. Frank usually has around 50 pieces of artwork for sale or exhibited at any one time. Has a blog which he would like to keep up-to-date.

## Prospective Users

The prospective users of the website are those people interested in his artwork.

The prospective users of the CMS will be Frank but in order to protect the content: two levels of access will be allowed.

1. Super user can change anything
2. Normal user can only add, modify and delete gallery items.

# Investigation and analysis

## Observation

There is no current CMS but the current website can be viewed at: [www.frankjennings.net](http://www.frankjennings.net)

## Interview with client

Interview with Frank Jennings (14/07/2014)

**Basic:**

1. Who are you?
   1. *Artist and former head of art department at South Downs College.*
2. What role do you play?
   1. *Artist, owner, operator, beneficiary of the site.*

**Design:**

1. What is the main colour scheme for the background of the menus, forms, reports (etc.)?
   1. *Blue-ish, silvery grey for the forms and menus. Mainly white with a bit of light grey for the reports.*
2. What font type and size is used for the menus, forms, reports (etc.)?
   1. *For titles:* **Calibri Bold 18** *either* **Black (lighter 25%)** *or* **Black**
   2. *For buttons:* **Arial Bold 12 Black**
   3. *For text:* Verdana 12 Black
3. Do you know if there are any colour blind employees?
   1. *There are not.*
4. What colour clashes do you want to be avoided?
   1. *“Colourful colours” i.e. don’t use pink or orange for example. Make the forms not boring (so not all grey) but add a small tint of colour (mainly blue tints).*
5. Do you have a logo, or does one need to be made?
   1. *Frank does not have a logo but is considering making/getting someone to make one.*
6. And if so, where does the logo want to be placed?
   1. *Top left if it’s a small square shaped logo, top middle or top left if it’s more of a strip/rectangular logo.*
7. Are any images going to be implement and if so where can I access them from?
   1. *Yes images will be an important part of the sight they shall be on your USB after I put them on there.*
8. How important is the visual design of the system?
   1. *CMS – not very important as this is an internal tool.*
   2. *Website – very important.*

**Current system:**

1. What is the system meant to do?
   1. *To manage the content of the site, particularly the gallery items which are often “in a mess”.*
2. What are its functions?
   1. Its main functions are to be able to add, edit and remove events and artwork.
3. What are its features?
   1. *Its features will include adding, editing and browsing data from the tables. Sending emails to customers/clients/viewers/followers.*
4. What is the issue with the current system?
   1. *The biggest problem is that I have very little control over the layout and content of my own website. The entire site is written in flash so it is not accessible on some devices, as well as this the navigation of the site is not easy to follow as it is not named, it uses pictures of hands to describe the button instead. It also does not achieve the main purpose of the site very well as the artwork that is displayed is restricted to a small frame and is hard to see. There is a zoom in feature but then you have to navigate yourself around the picture. Another issue with the site is that there is no way to actually “buy” artwork. To buy a piece of artwork you have to email Frank and make a deal with him. Another problem is that when searching through the gallery, there is no quick and easy way to see if the art is for sale or not. Also there is no easy way to actually search through the gallery with a search bar, you have to simply go through page by page.*
5. In what format is the current system?
   1. *There is no current system, it mainly consists of emails.*
6. What data needs to be collected?
   1. *The information about artwork, events and users*
7. If so how is it stored?
   1. *It will all be stored in tables. The artwork pictures may be stored in an external directory to save space (because there won’t be multiple copies stored on the computer).*
8. What kind of data being entered and stored?
   1. *Images and text.*
9. What data needs to be stored about the persons using the system?
   1. *Username*
   2. *Password*
   3. *Email*
10. What fields need to be filled out on data entry?
    1. *When entering a new artwork:*
       1. *Artwork Name*
       2. *Artwork Thumbnail*
       3. *Artwork Picture (at least 1, can be the thumbnail)*
       4. *Artwork Picture Source*
       5. *Artwork Picture File Type (i.e. Thumbnail, Gallery Picture)*
    2. *When entering a new event:*
       1. *Exhibition Name*
       2. *Exhibition Location*
    3. *When entering a new piece of artwork for sale:*
       1. *Artwork Name*
       2. *Price*
       3. *Artwork Picture Name*
    4. *When entering a new user:*
       1. *Username*
       2. *Password*
11. Who has access to the system?
    1. *Only I need to have access to the CMS.*
12. What permissions do they have?
    1. *Frank will have all the permissions (super user), the normal user will only have access to adding & editing, artwork entries and event entries.*
13. How many end users are there (roughly)?
    1. *One main end user which is Frank, however multiple permission levels (probably 2) so that extra hands can be used to help with certain tasks.*
14. What kind of IT skills do the end users have?
    1. *My skills are not very high.*
15. What sort of peripherals are there?
    1. *He owns a printer which is used occasionally.*
16. Hardware spec/OS.
    1. *I usually use my Apple Mac but may sometimes use a laptop.*
17. How often is the system used?
    1. *At the moment I make updates infrequently. I would like to use the system daily or at least weekly.*
18. What security measures are there?
    1. *There are currently no security measures.*
19. If so do these need to be more secure?
    1. *The answer to the before question was no.*
20. What are the main processes?
    1. *Adding new data to the tables*
    2. *Sending Update Emails*
    3. *Turning data into html format for website*
21. What are the main calculations that need to be carried out?
    1. *Convert the image files and the text content and any formatting data into a form suitable to be used by the website.*
22. Are there any time consuming tasks?
    1. *Apart from creating the artwork. It takes me some time to get the images ready to be sent for adding to the site. And remembering the differences in the thumbnails and main pictures.*
23. How frequently do you make backups and how are they stored?
    1. *There are currently no backups of the system as it doesn’t exist.*

## Example documents from user

Blogs

Photos

News articles

Details of Events

Videos

(Existing system documentation is not available from the current developers)

Site Map

## Questionnaires

Due to Frank being a soul trader, a questionnaire is not needed as it will be quicker, easier and more efficient to simply ask him the questions in the interview.

**Design:**

1. What colour clashes do you want to be avoided?
   1. Yellow & Pink
   2. Red & Green
   3. Orange & Purple
   4. Green & Grey
   5. Other ………………………………………………………………………………………….
2. Do you have a logo?
   1. Yes
   2. No
   3. I don’t know
3. If not, does one need to be made?
   1. Yes
   2. No
   3. I don’t know
   4. Didn’t answer Yes for above question
4. Where does the logo want to be placed?
   1. Top Left
   2. Top Right
   3. Bottom Left
   4. Bottom Right
   5. Top Middle
   6. Other …………………………………………………………………………………………
5. How important is the visual design of the system? (1-5, 1=low 5=high)
   1. 1
   2. 2
   3. 3
   4. 4
   5. 5

**Forms:**

1. What do you want the main colour scheme for the background of the forms?
   1. Light Grey
   2. Light Blue
   3. White
   4. Beige
   5. Other ………………………………………………………………………………………….
2. What font type do you want to be used for the forms?
   1. Arial
   2. Times new roman
   3. Courier
   4. Verdana
   5. Other ………………………………………………………………………………………….

**Reports:**

1. What do you want the main colour scheme for the background of the reports?
   1. Light Grey
   2. Light Blue
   3. White
   4. Beige
   5. Other ………………………………………………………………………………………….
2. What font size do you want to be used for the forms?
   1. 12
   2. 14
   3. 16
   4. 18
   5. Other ………………………………………………………………………………………….
3. What font type do you want to be used for the reports?
   1. Arial
   2. Times new roman
   3. Courier
   4. Verdana
   5. Other ………………………………………………………………………………………….
4. What font size do you want to be used for the reports?
   1. 12
   2. 14
   3. 16
   4. 18
   5. Other ………………………………………………………………………………………….

**Personnel:**

1. Do you know if there are any colour blind employees?
   1. Yes
   2. No
   3. I don’t know

## Existing system

<http://homepage.ntlworld.com/frank.jennings2/frankdotnet12.html>

Site Map:

* About
* Applause
  + Links out to external pdf
* Exhibitions
  + Links out to external pdf
* Gallery
  + “Acquisition opportunity” 🡺 Leads to email
* Links
* Contact Us 🡺 Leads straight to email
* Video
  + Link to email for video maker

## DFD (Existing system)

Do On Paper First

## Limitations of the current system

One of the limitations is that Frank isn’t able to easily update the site and so none of his new artwork is on there. As well as this, although the site contains a “***shop”***, there is no actual functionality for users to buy any work, the navigation on the site is completely meaningless to anyone who goes on, and the entire site is built in flash and therefore can’t be accessed by some devices. Finally there is nowhere that displaces updates or upcoming exhibitions so people who go on are unable to see what is going on “in Franks world”.

# Problem Definition

## Aims

### The main tables will be:

|  |  |  |  |
| --- | --- | --- | --- |
| Aim | Table Name | Brief Description | New Table |
| A1 | tblArtwork | Holds the details of up to 100 pieces of artwork | Yes |
| A2 | tblArtworkPics | Holds 1 thumbnail and at least 1 full sized image of each piece of artwork | Yes |
| A3 | tblExhibitions | Holds details of any past and future exhibitions | Yes |
| A4 | tblForSale | Holds the sales information for all pieces of artwork that are for sale | Yes |
| A5 | tblUser | Holds the login and personal information for all users of the system | Yes |

### The main outputs will be:

|  |  |  |  |
| --- | --- | --- | --- |
| Aim | Output | Brief Description | New Output |
| B1 | HTMLFile | A HTML file that contains the website updates ready to be uploaded via FTP to a host. | Yes |
| B2 | HTMLPage | A single HTML page to be collected to make a file. | Yes |
| B3 | BrowserOpen | Open the browser to view the website on. | Yes |
| B4 | UpdateEmail | Sends out emails to everyone who has subscribed with the updates for events, uploads etc. | Yes |

### The main processes will be:

|  |  |  |  |
| --- | --- | --- | --- |
| Aim | Process | Brief Description | New Output |
| C1 | HTML File Create | To create a file to be uploaded to the site | Yes |
| C2 | HTML Create | Create a HTML page to show what the gallery, event page (etc.) would look like | Yes |
| C3 | Browser View | Open the above in a browser | Yes |
| C4 | Log In | Logging in | Yes |
| C5 | Update Emails | Sending Emails with updates | Yes |
| C6 | Password Encryption | ‘Hashing’/Encrypting passwords | Yes |

## General:

|  |  |  |
| --- | --- | --- |
| Aim | Consideration | Brief Description |
| D1 | Data Entry | All tables will have forms to enter data in them. |
| D2 | Reports | Reports showing the data that is requested in an easy to read format |
| D3 | Security | Logins and encryption of passwords to make the system more secure |
| D4 | Backup | Backup of the database (especially the tables) to allow easy recovery from technical errors. |
| D5 | Menu Driven | The raw database will be hidden and the database will be accessed by forms. |
| D6 | Data Edit/View | Forms that allow the edit and browsing of data from tables |

## Validations:

|  |  |  |
| --- | --- | --- |
| Aim | Consideration | Brief Description |
| E1 | Add Artwork Form | Presence check for relevant fields |
| E2 | Add Artwork Form | Drop down field for relevant fields |
| E3 | Add Event Form | Presence check for relevant fields |
| E4 | Add Event Form | Format Check for relevant fields |
| E5 | Add Sale Form | Presence check for relevant fields |
| E6 | Add Sale Form | Format check for relevant fields |
| E7 | Add User Form | Presence Check for relevant fields |

## Limitations of the new system

# Objectives

## Data tables

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Table | Fields | Aims |
| 1 | tblArtwork | ArtworkID  ArtworkName  ArtworkType | A1 |
| 2 | tblArtworkPics | PicID  PicFileName  PicSource  PicFileType  Resolution  ArworkID  ImageType  ImageOLE | A2 |
| 3 | tblExhibitions | ExhibitionID  ExhibitionName  LocationName  Address Line 1  Address Line 2  Town/City  County  PostCode  FromDate  TooDate  OpenTime  ClosingTime  Description | A3 |
| 4 | tblForSale | SaleID  ArtworkID  ArtworkName  ArtworkType  Price  PicID  PicFileName  PicSource | A4 |
| 5 | tblUser | UserID  LoginName  LoginPassword EmailAddress | A5 |

## Outputs

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Name | Data Shown | Aims |
| 6 | HTMLFIle |  | B1 |
| 7 | HTMLPage |  | B2 |
| 8 | OpenBrowser |  | B3 |
| 9 | UpdateEmail |  | B4 |

## Processing tasks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Task | Name | Input | Processing | Output | Aims |
| 10 | HTMLFile |  |  |  | C1 |
| 11 | HTMLPageCreate | Artwork Page Frame  ArtworkName  ArtworkType  PicFileName  Event Page Frame  ExhibitionName  LocationName  Address  FromDate  TooDate  OpenTime  ClosingTime  Description  Sale Page Frame  ArtworkName  ArtworkType  Price  PicID  PicFileName  PicSource | Input Each element inside relevant tags and places | Artwork HTML Page  Event HTML Page  Sale HTML Page | C2 |
| 12 | BrowserView | Artwork HTML Page  Event HTML Page  Sale HTML Page  Other HTML Pages | Create Directory and reference each to each other | Open directory in browser | C3 |
| 13 | LogIn | txtUsername  txtPassword | If txtUsername = tblUsername and txtPassword = tblPassword then open main menu form, else output ”Wrong username or password” | frmMainMenu  or  MsgBox(“Wrong username or password, please try again”) | C4 |
| 14 | UpdateEmail | Email Frame  ArtworkName  ArtworkType  PicSource  ExhibitionName  LocationName  Address  FromDate  TooDate  OpenTime  ClosingTime  Description  LoginName EmailAddress | Insert each element into relevant part of email | Send email to users email using users LoginName as their name | C5 |
| 15 | PasswordEncrypt | LoginPassword  Encryption Table | Run LoginPassword through a set of encryption tables to encrypt it. DO the reverse in unencrypt it. | Encrypted Password or Unencrypted Password | C6 |

## User interface

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Form Name | Purpose | Aims |
| 16 | Main Menu | Buttons:   * Add User * Add Artwork * Add Event * Send Update Email * Log Out * Exit * Edit/Browse Users * Edit/Browse Artwork * Edit/Browse Events | D5 |
| 17 | Add User | Adds a new user to tblUsers | D1 |
| 18 | Add Artwork | Adds a new artwork to tblArtwork and its pictures to tblArtworkPics | D1 |
| 19 | Add Event | Adds a new event to the tblExhibitions | D1 |
| 20 | Edit/Browse Users | Browse through and edit all entries in tblUser | D6 |
| 21 | Edit/Browse Artwork | Browse through and edit all entries in tblArtwork and tblArtworkPics | D6 |
| 21 | Edit/Browse Event | Browse through and edit all entries in tblExhibitions | D6 |

## Validations

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Form Name | Validation | Aims |
| 22 | Add Artwork Form | Presence Check on:   * ArtworkName * PicFileSource * PicFileType   Drop Down Menu on:   * PicFileType | E1  E2 |
| 23 | Add Event Form | Presence Check on:   * ExhibitionName * LocationName   Format Check on:   * FromDate * TooDate * OpenTime * ClosingTime * PostCode | E3  E4 |
| 24 | Add Sale Form | Presence Check on:   * ArtworkName * Price * PicFileName   Format Check on:   * Price | E5  E6 |
| 25 | Add User Form | Presence Check on:   * LoginName * LoginPassword | E7 |

## Quantitative performance considerations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Name | Description | Requirement | Aims |
|  |  |  |  |  |
|  |  |  |  |  |

## Qualitative evaluation criteria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Name | Description | Requirement | Aims |
|  |  |  |  |  |
|  |  |  |  |  |

## Data security and integrity

I plan on adding an encryption for the passwords of the users to enhance the data security. As well as this the login helps keep the data secure as you must login to view any of it.

A backup plan will be discussed the Frank (the client).

Enter Data Protection Act Meetings

# Error log

## Error log

## Error log evidence