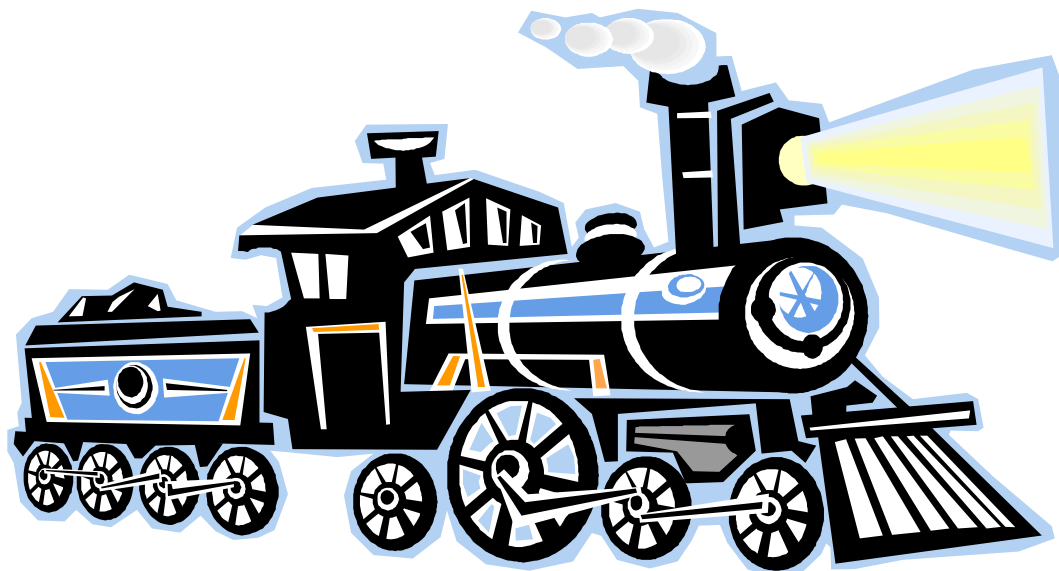

The Loco Shed, Website with Forum facility



Glenn Eaton

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Introduction

A new business, called *The Loco Shed* is to be created using only the internet as it's sole means of generating sales. This documentation covers conception, the business's mission statement and the benefits of social networking. Installation instructions for the site and user instructions are also included.

Idea Development

To succeed in business the best route to success is to create a service or product that does not exist to customers and is unique. Many businesses in the model railway industry only cover one aspect of the hobby. The aspects often covered are a retail business with or without an online presence, or an online resource.

The idea spawning the creation of the Loco Shed was to combine these aspects of retail and an online community together onto the one site. Market research was conducted, refer to the section on Market Research under Appendices.

New comers to the hobby can be the biggest spenders of model railway equipment as there can be a significant amount of equipment required to begin a model railway. At the same time entering the hobby can be daunting due to the amount of knowledge needed to construct and run a railway. The aim of The Loco Shed is to provide a one stop site; where customers can shop or visit the forum to discuss model railway related issues.

Mission Statement

Our mission at The Loco Shed always will be to provide the best service to the model railway community. We will do this by supplying products timely and at a competitive price. We will provide our customers with value through our products and services, committing ourselves to providing the quality, variety and convenience they expect.

We will promote the model railway community and support modellers to join together by providing a safe environment that encourages fellowship and helping each other to enjoy the great hobby of model railroading.

Social Networking Benefits

There are a number of benefits associated with social networking. the ones included are relevant to The Loco Shed in building its business.

Lower Costs

It is significantly cheaper to build rapport with customers using online networking than traditional advertising. It is expected that a moderator employed by The Loco Shed will assist with questions that

remain unanswered for some time. This will help build the relationship between the *The Loco Shed* and its customers. This relationship will be more valuable and personal than what would be attainable by advertising alone. Advertising can be impersonal; the “one size fits all” no longer seems to apply.

It should be noted that social networking will not remove the need entirely for general media advertising, but it will improve the efficiency of the advertising that is done. (Mize, 2007)

Credibility and Trust

Connecting with customers on a personal level builds trust and credibility. For maximum benefit the hard sell must be avoided. Being too pushy could be perceived as spam. Assisting customers with their problems first builds trust and they are more likely to buy from the site on their own accord. A product that will solve their problem should be mentioned and assistance could be given to help them find it on the site. It's best to wait for opportunities to present themselves rather than forcing a situation. (Mize, 2007)

Community Building

Social networking, encouraged by the site's forum, will help model railroaders connect together to form a community. This community will have as its foundation friendship and it will grow as modellers and The Loco Shed help with the problems of others.

Site User Instructions

Generally the site is intuitive and should be easy to use for most users. The layout has been designed to that it is as “standard” as possible.

This section covers the main areas of usage of the site.

Searching Products

The search facility is available anywhere from the site. To search for a product type in your search criteria into the search products field as indicated in Figure 1 Searching for Products. Wild cards, i.e. the “*” character, can be used at the start or end of your search word or phrase. If they are not added the site will add them for you. Generally this is the best way to maximise the results.

Next click on the *go* button and your search results will appear on a new page. A new search can be entered at any time using the same method.

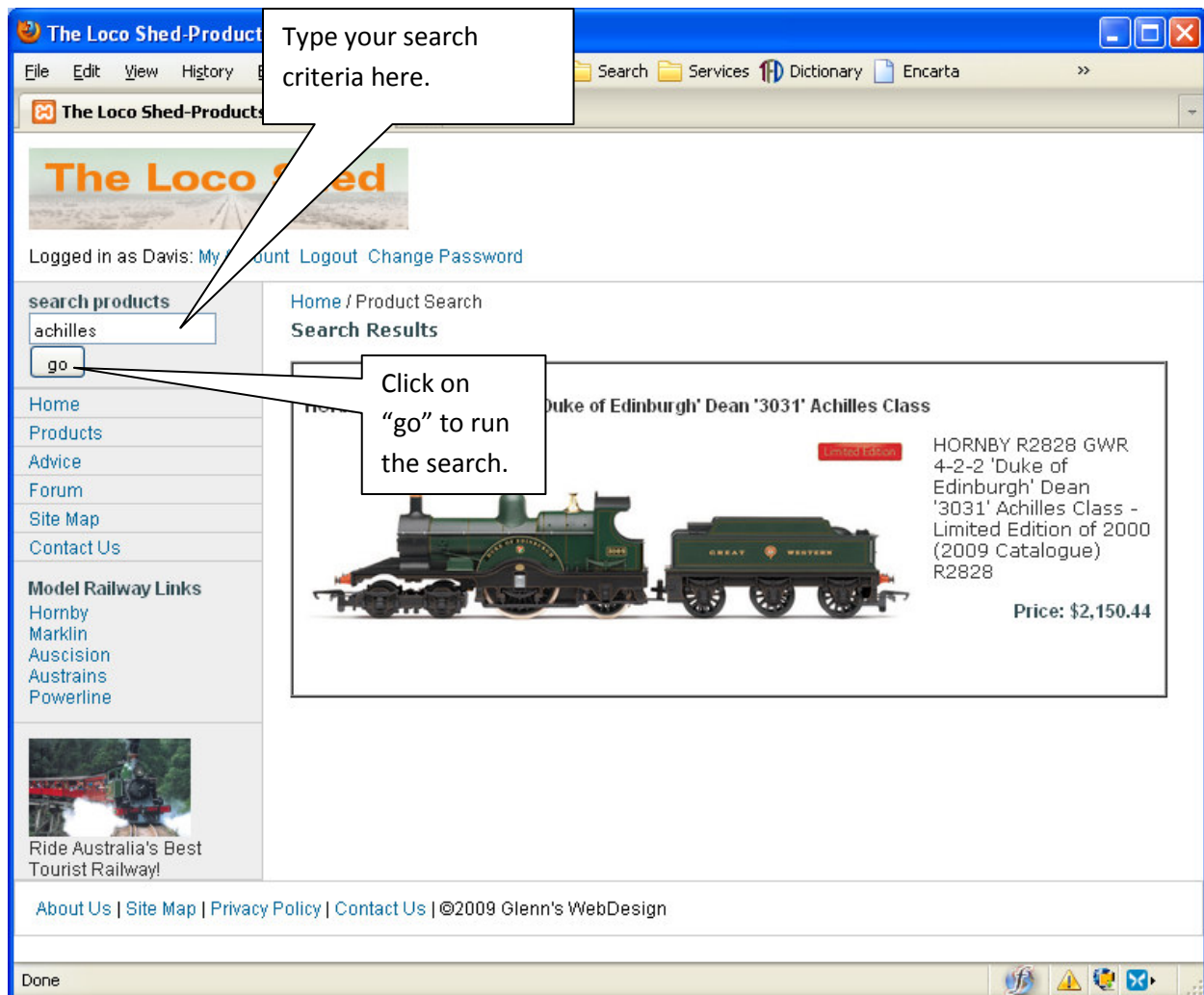


Figure 1 Searching for Products

Registering

To use the forum and order products (coming soon) you must first register. Click on the *register* link as shown in Figure 2 Registering on The Loco Shed. This figure shows what happens if the correct information is not entered into the fields. Ticks indicate that the information is good, but a red cross indicates an error. Read the adjacent error message and fix up the information in the field.

If the user name you have selected is already taken a new one must be selected. All user names must be unique.

If you do not wish your email address to be displayed in the forums untick the box labelled *Show in Forum*.

It is important to use a password that you are unlikely to forget. Later a facility will be added to email your password to you. Until then if you forget your password then a call to the Loco Shed is required to reset it.

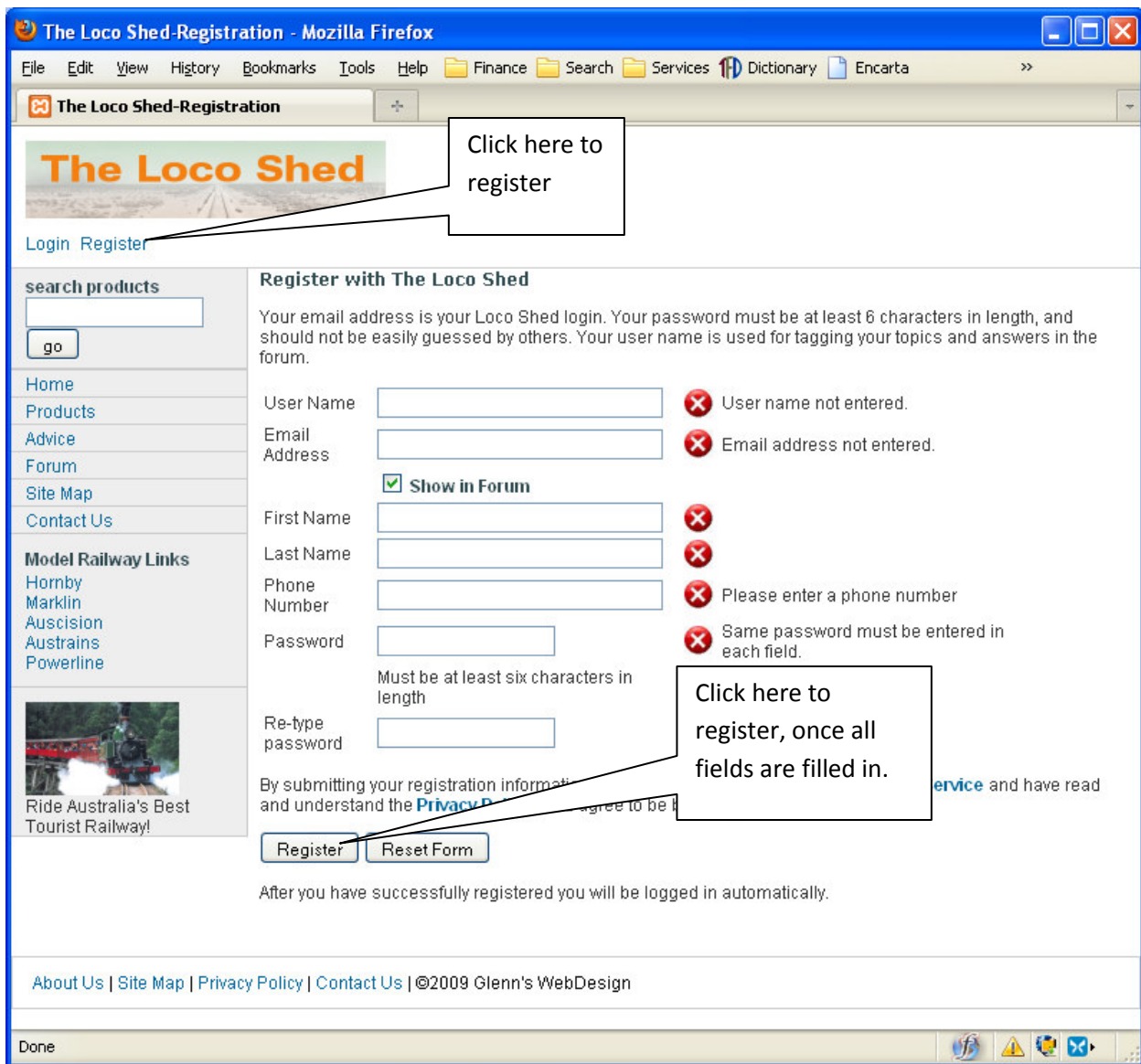


Figure 2 Registering on The Loco Shed

Once information is entered click on the *Register* button. If successful you will be automatically logged in and be sent to the welcome page from The Loco Shed as shown in Figure 3

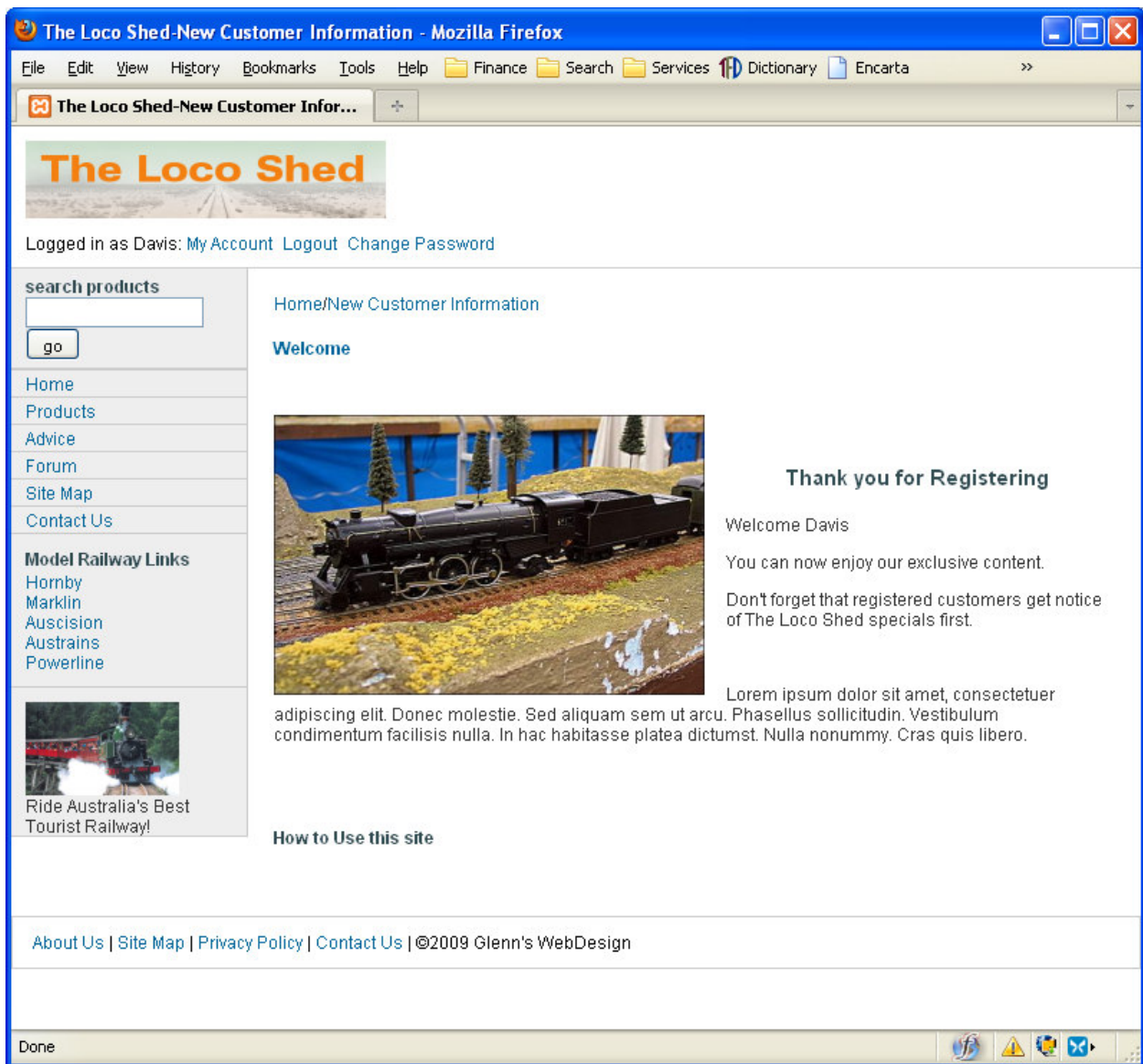


Figure 3 Registered successfully and logged in.

Logging In

If you return to the site at a later date you will need to log in to restore full access. Click on the *Login* link and the screen shown in Figure 4 will be shown. Enter your email address and password. There is no limit to the number of log in attempts that can be made.

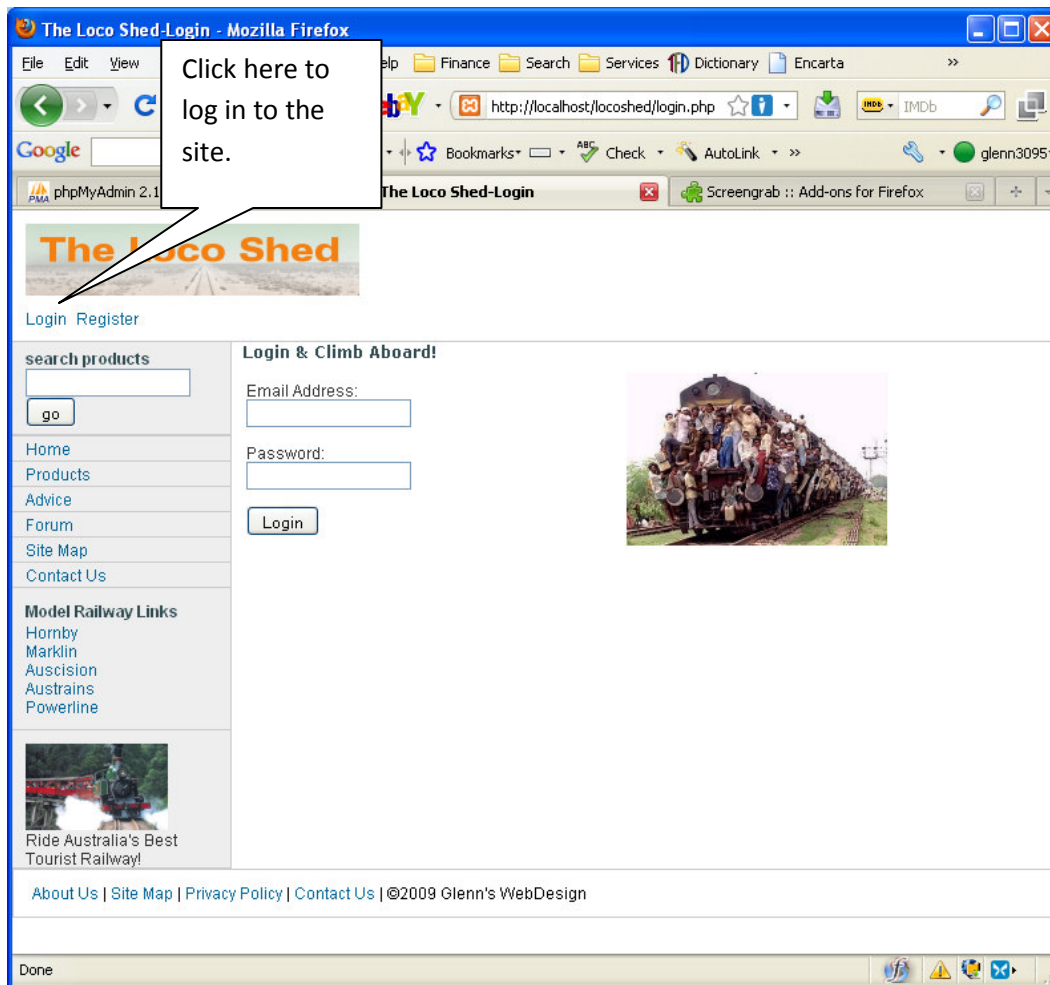


Figure 4 Logging in.

Changing Your Account Details

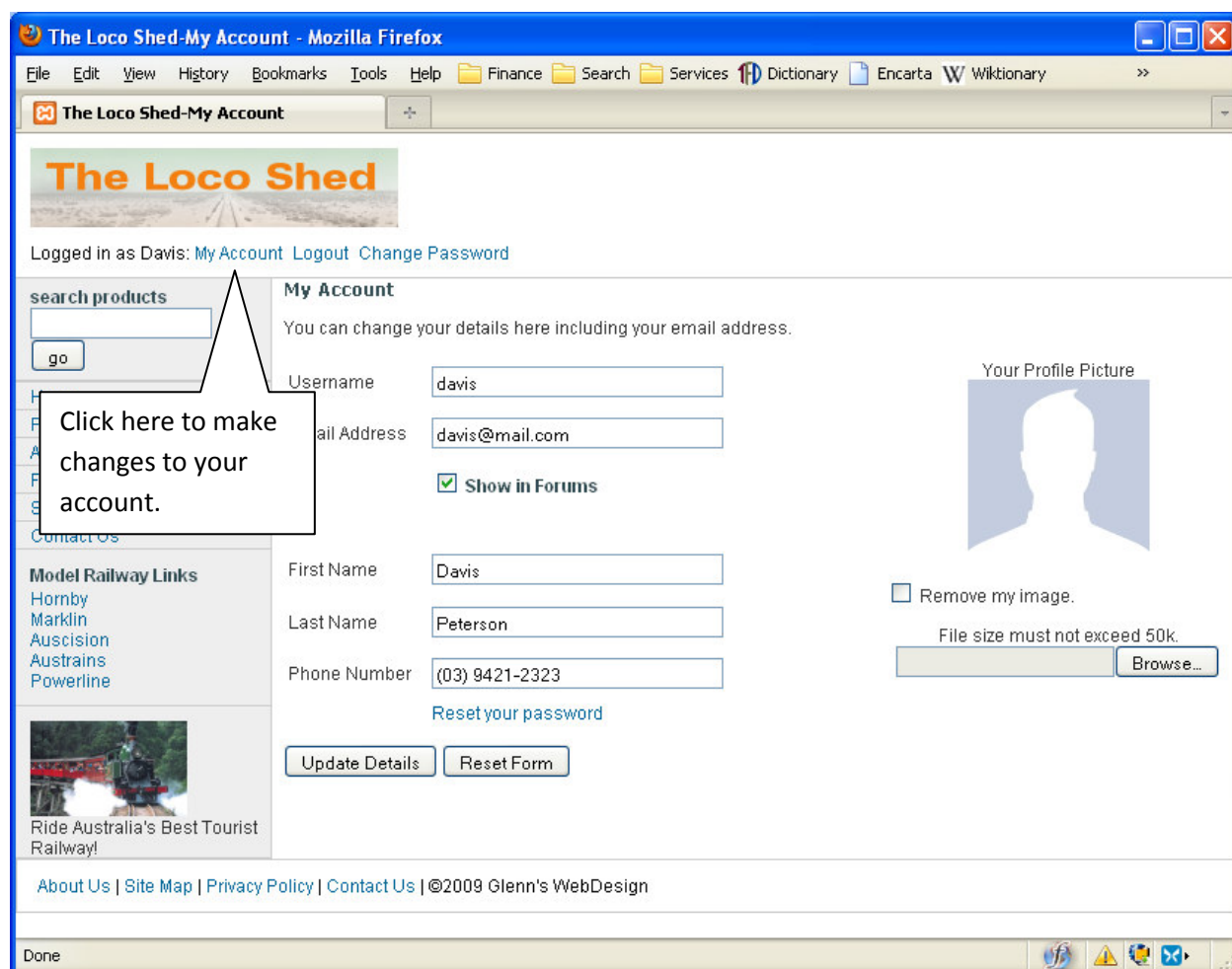


Figure 5 Changing your account details.

Once registered users can add a photo to their account which is displayed next to their name in the forum.

If you want to remove your photo simply check the box labelled *Remove my image* and your image will be replaced with the default one as shown in Figure 5.

If you are uncomfortable with your email address being published with your forum entries clear the tick from the *Show in Forums* box.

Note that the same validation is done here as for new users. Your user name can be changed but the new one must be unique.

Using The Forum

This section describes the use of the forum, the main tool for encouraging social networking on The Loco Shed site.

The Main Forum screen

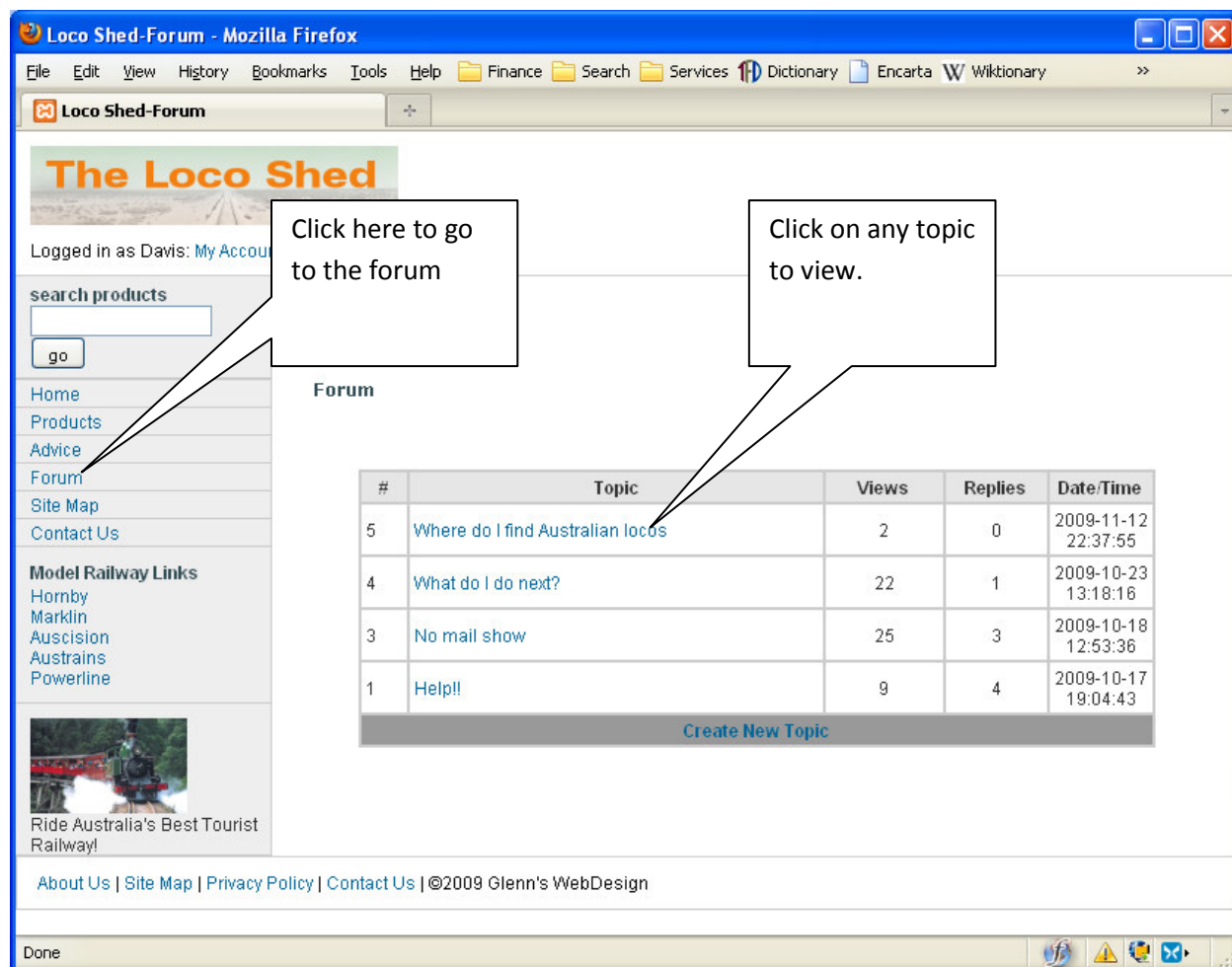


Figure 6 Using the Forum

To enter the forum simply click on the *Forum* link as shown in Figure 6 Using the Forum. After clicking a list of current topics are displayed. If you are logged in you can create a new topic, otherwise the topics can only be viewed.

To view, click on the desired topic as shown.

Viewing a Topic

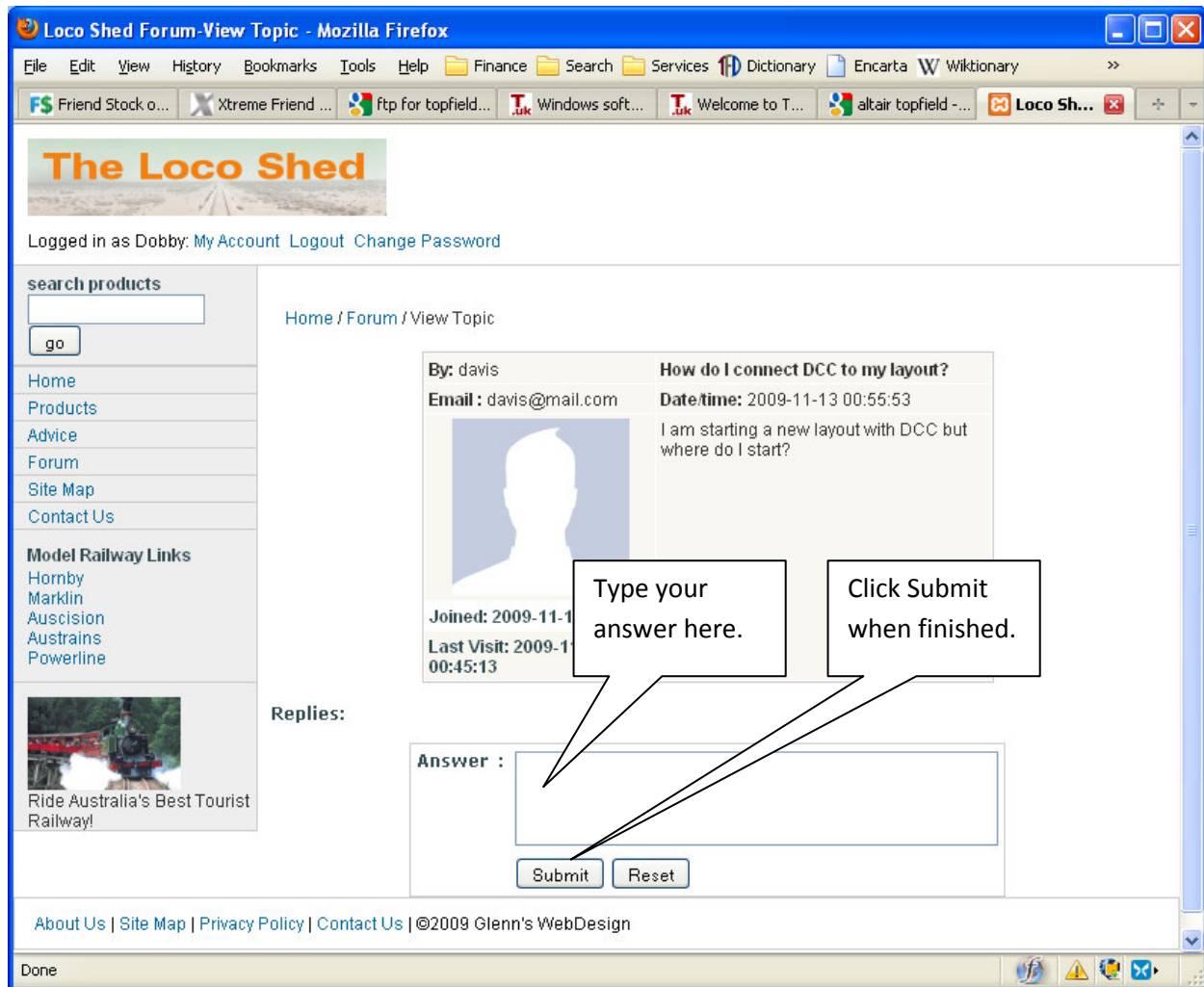


Figure 7 Viewing a Topic's details.

When a topic is selected the screen will show the selected topic as shown in Figure 7 Viewing a Topic's details.

If you are logged in a form will be present at the bottom of the screen to allow the entering of a reply to the forum question. If desired enter an answer and click on submit when finished.

Please note that the forum is moderated. If the moderator finds any questions or answers that are offensive they will be removed. Repeat offenders may have their Loco Shed membership cancelled.

Starting a New Topic

The screenshot shows the 'Loco Shed-Forum' page in Mozilla Firefox. The browser's address bar shows 'Loco Shed-Forum'. The page has a header with the forum's name and a navigation menu. A sidebar on the left contains links to 'Home', 'Products', 'Advice', 'Forum', 'Site Map', 'Contact Us', and 'Model Railway Links'. The main content area is titled 'Create New Topic' and contains the following fields and buttons:

- Topic :** A text input field containing 'How do I connect DCC to my layout?'. An annotation box points to this field with the text 'Type your topic or question here'.
- Detail :** A text input field containing 'I am starting a new layout with DCC but where do I start?'. An annotation box points to this field with the text 'Click Submit when finished.'
- User Name :** A text input field containing 'davis'.
- Email :** A text input field containing 'davis@mail.com'.
- Buttons:** 'Submit' and 'Reset' buttons.

The footer of the page contains links to 'About Us', 'Site Map', 'Privacy Policy', 'Contact Us', and a copyright notice for '©2009 Glenn's WebDesign'.

Figure 8 Starting a new topic.

Once *Create New Topic* is clicked you will be taken to a screen similar to the one shown in Figure 8. In the *Topic* field enter your topic or question. It should be as brief and concise as possible so that others will have the best chance of supplying a useful answer.

Next enter some detail about your question or topic in the *Detail* field. Once satisfied with your entry click on *Submit*. To start from scratch and clear the form click on *Reset*.

After a successful submission a link will be available to *View your Topic*. Clicking this will take you the list of topics. Select the one you created. You should see a screen like the one shown in Figure 9.

Entering An Answer

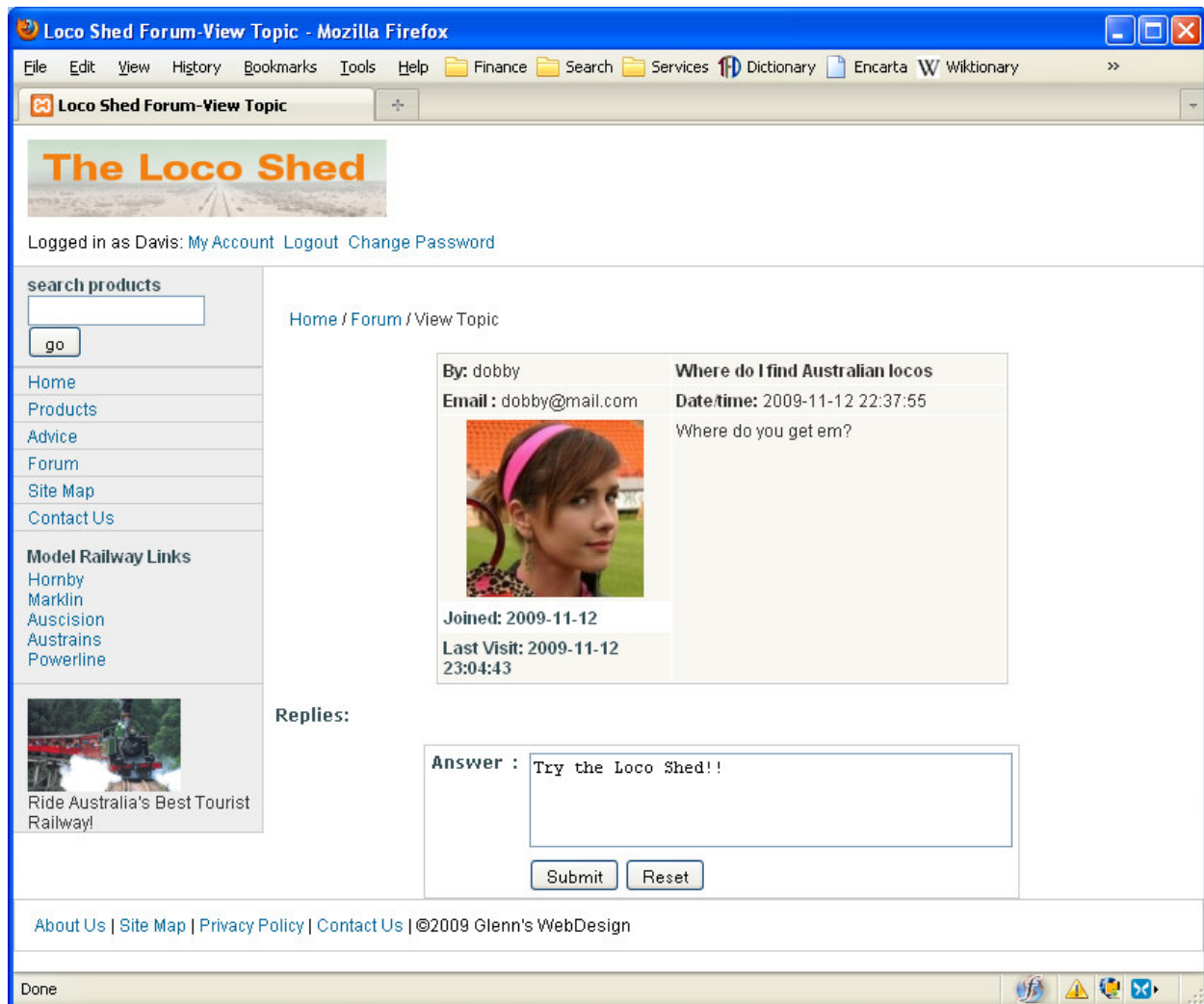


Figure 9 Viewing a topic and entering an answer.

To enter an answer type in the text box supplied as shown in Figure 9 Viewing a topic and entering an answer.

After clicking *Submit* your answer will be displayed along with all of the other answers, with the latest one at the top as can be seen in Figure 10 Viewing the new reply to a topic.

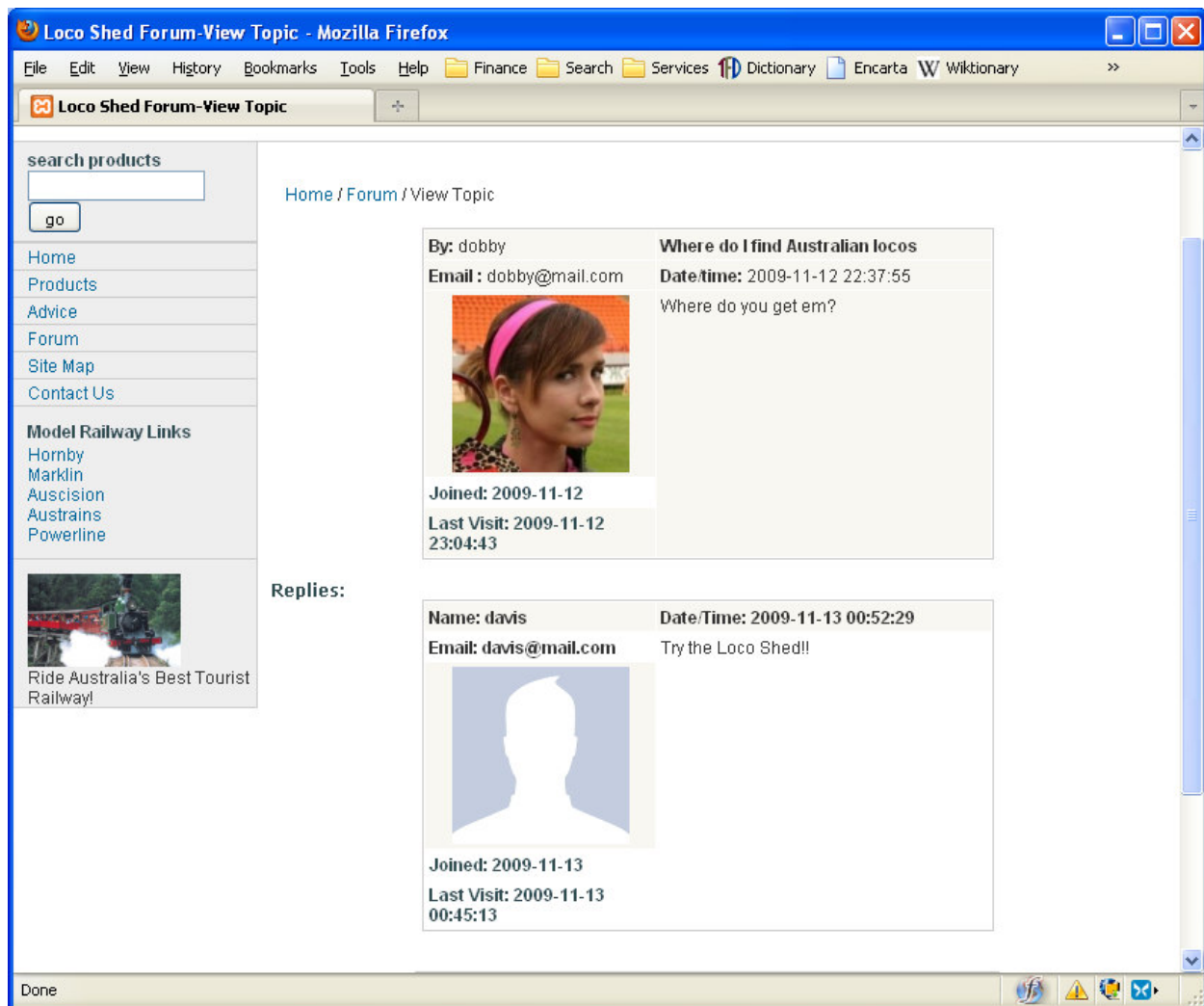


Figure 10 Viewing the new reply to a topic.

Evaluation

After testing the website performs quite well. An initial release to a number of beta testers has been quite positive. The product search facility is very popular as it can save a lot of time for customers searching for a particular product. The forum has also proved useful. Users have posted and answered some very good topics. It would be useful to gather long term usage statistics and see if traffic increases.

There are a number of improvements that need to be done and these are listed below.

Improvements

The following improvements should be done at the next release:

- | | |
|-----------|---|
| Critical | <ul style="list-style-type: none">• Redirect users not logged in to the <i>No Road</i> page if they try to access a restricted page directly. |
| Important | <ul style="list-style-type: none">• Provide a password recovery service, using the customer's email address.• Limit the number of login attempts that can be made.• Automatically resize the uploaded user image to a square shape so that it fits the frame in the html page better.• Install Webaliser or similar to gather internet traffic statistics.• Establish a data backup plan in case of server failure. |
| Optional | <ul style="list-style-type: none">• Add a search facility for the forum topics.• Add a search facility for the advice and other articles.• Group topics to a common theme, such as scenery, electrics etc• Add an online shopping facility, complete with shopping cart.• Allow customers to browse products by category• Use the empty space at the top for advertising or a neat mini slide show. |

Conclusion

The internet is a cost effective way to start a new business. Like normal businesses the goal must be clearly defined and costed at the start. The website is accessible by many users but some form of advertising is needed to bring them in. Advertising can be targeted using hobby magazines and websites such as Facebook who have a large following and categorise and know their users .

As new products become available they can be easily added to the site, along with colour images so the customer can see what they look like.

The forum facility will over time help build a community of hobbyists that will have at least some loyalty to The Loco Shed when it comes to re-equipping their railway. Management need to realise that the site and forum can't generate sales on their own. The business must be managed so that costs are kept down and prices remain competitive for customers. Above all, customer service is still the most important asset a retail business can have. Customers always come first and should never be taken for granted.

Appendices

This section contains additional information.

Market Research

Before designing a business and developing a web site some preliminary research is a good way to gauge what the competition is like. Shortcomings in competitor's site can assist in avoiding them in developing the new one.

Gauge One Gallery

<http://gaugeonegallery.com/>

Gauge One Gallery specialises in the sale of gauge one railway equipment. As the market for garden railway equipment is limited they need to offer their service to customers nationally. The business is based in Sydney.

The internet is the ideal way for them to do this. The site is in it's infancy as online sales are not offered.

Site Features:

- Home
 - Visually appealing front page with simple yet effective graphics
 - Most wanted information can be found without too much page scanning by the user.
- Garden Railways
 - Page about garden railways with hobbyist stories and photos of their layouts.
- Newsletter
 - Mostly new products.
 - Users can register on the mailing list.
- Products
 - The product categories are hard to read being blue text on a black background.
 - Products are listed with no prices. Information is very basic at best.
- Special Offers
 - Virtually the same as the products page, except that there is actually more stock here.
- Contact Us

- Information on how to get there, plus some humour about getting there by train.
- Features an easy to follow map.
- Phone, email and address neatly presented.

Shortcomings:

- No online buying
- Navigation needs improvement
- No links to other Gauge One resources.
- Hard to find what you want in the products page.
- Not searchable.

Branchline

<http://www.branchline.com.au/>

A hobby shop located in Croydon.

Site features:

- Home
 - Excellent graphics on front page.
 - Mini slide show attracts the user's attention.
 - Excellent navigation throughout.
- Products
 - Categories are easily seen to the left of the screen.
 - Presented clearly with a thumbnail picture and price.
 - Clicking on the thumbnail enlarges the image and shows more product details, including information about the model's prototype.
- Specials
- FAQ's
 - Useful information about model railroading.

- Image gallery
- About Us
 - Succinct information about the business and why the user should shop there.

Shortcomings:

- No newsletter to gather user names and contacts.
- No facility for online sales
- Site is not searchable
- No links to other model railway resources.
- Gallery only has images, very little information about the image subject.
- FAQ's page overruns on the Firefox browser
- A specials page with no specials.
 - A user might get the impression that the customer is not looked after.
 - Confusing navigation, located under the Products page, but it has a direct link from the main page.

HobbyCo

<http://www.hobbyco.com.au/>

A large and well established hobby shop in Sydney.

This site has a home page only from which the user goes straight into the products. A log in field is located at the top. Once logged in text at the top of the page indicates the user's log in name.

Site Features:

- The only site looked at to have an online purchasing ability.
- Site is searchable
- Simple navigation

Shortcomings

- Log in functionality somewhat crude.
 - Password recovery does not appear to work.

- Error messages too brief and not professional looking.
- Thumbnails are too small to easily see what the product is. The user has to click further to get a useful image.
 - The product detail is scant.
- No hobby information at all.
- No links for any hobby resources.
 - Does little to encourage the user to get into a hobby.
- No site newsletter appears to be available.

Technical Information

This section contains information for technical support personnel of The Loco Shed.

Installation Guide

The site was constructed using MySQL version 5.0.45 and PHP version 5.2.4

The site runs best with Apache 2.0 server software. Microsoft Windows Internet Information Server (IIS) caused the user image upload facility to fail.

The supplied site files can be copied directly to the server file system or by using FTP.

SQL Script

The following is the SQL script that needs to be run to build the MySQL database. It needs to be run with *root* permissions. Some initial data is included for testing and demonstration purposes.

```
-- phpMyAdmin SQL Dump
-- version 2.11.1
-- http://www.phpmyadmin.net
--
-- Host: localhost
-- Generation Time: Nov 13, 2009 at 10:41 PM
-- Server version: 5.0.45
-- PHP Version: 5.2.4

SET SQL_MODE="NO_AUTO_VALUE_ON_ZERO";

--
-- Database: `locoshed`
--
DROP DATABASE `locoshed`;
CREATE DATABASE `locoshed` DEFAULT CHARACTER SET latin1 COLLATE latin1_general_ci;
USE `locoshed`;

--
-- Table structure for table `customerdetails`
--
DROP TABLE IF EXISTS `customerdetails`;
CREATE TABLE IF NOT EXISTS `customerdetails` (
  `custID` int(10) unsigned NOT NULL auto_increment,
  `firstName` varchar(40) collate latin1_general_ci NOT NULL,
  `lastName` varchar(40) collate latin1_general_ci NOT NULL,
  `userName` varchar(40) collate latin1_general_ci NOT NULL COMMENT 'Displayed in forum
answers and questions.',
  `email` varchar(70) collate latin1_general_ci NOT NULL,
  `showemail` tinyint(1) NOT NULL COMMENT 'Show email in forum? 1=Y 0=N',
  `phoneno` varchar(15) collate latin1_general_ci NOT NULL COMMENT 'home or mobile,
Australian format only.',
  `password` varchar(100) collate latin1_general_ci NOT NULL,
  `datetimeLastVisit` datetime default NULL,
  `dateJoined` date NOT NULL,
  `noVisits` mediumint(9) default NULL COMMENT 'No of visits since joining.',
```

```

`userImage` varchar(50) collate latin1_general_ci default NULL COMMENT 'Filename of
user's profile image.',
PRIMARY KEY (`custID`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COLLATE=latin1_general_ci COMMENT='Created for Adv
Dip PHP assignment' AUTO_INCREMENT=42 ;

--
-- Dumping data for table `customerdetails`
--

INSERT INTO `customerdetails` (`custID`, `firstName`, `lastName`, `userName`, `email`,
`showemail`, `phoneno`, `password`, `datetimeLastVisit`, `dateJoined`, `noVisits`,
`userImage`) VALUES
(25, 'Glenn', 'Eaton', 'glenn123', 'glenn@mail.com', 1, '(03) 9232-9900',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-23 10:57:37', '2009-09-26', 9, 'img-25-
2.jpg'),
(26, 'Bert', 'Bartred', 'bert', 'bert@mail.com', 1, '(03)9992-2233',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-26 22:58:00', '2009-09-26', 1, NULL),
(27, 'Alice', 'Wonderland', 'alice', 'alice@mail.com', 1, '(03)3343-4534',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-26 23:12:34', '2009-09-26', 1, NULL),
(28, 'Jim', 'Bean', 'jim', 'jim@mail.com', 1, '(03)4343-3333',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-26 23:22:29', '2009-09-26', 1, NULL),
(29, 'Debbie', 'Sprice', 'debbie', 'debbie@mail.com', 1, '(02) 3334-1255',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-11-12 22:31:01', '2009-09-26', 4, 'img-29-
2.jpg'),
(30, 'Peter', 'Davis', 'peter', 'peter@davis.com', 1, '(03)2323-4545',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-27 00:47:00', '2009-09-27', 1, NULL),
(31, 'Anne', 'Gables', 'anne', 'anne@mail.com', 1, '(03)2323-4433',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-27 00:57:34', '2009-09-27', 3, NULL),
(32, 'Kyle', 'Eaton', 'kyle', 'kyle@mail.com', 1, '(03) 9431-2145',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-09-27 13:31:54', '2009-09-27', 1, NULL),
(33, 'Glenn', 'Eaton', 'glenn31212', 'glenneaton@yahoo.com.au', 1, '0427-057-999',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-23 11:17:09', '2009-10-15', 2, 'img-33-
1.jpg'),
(34, 'Bob', 'Hall', 'bobby', 'bob@one.com', 1, '0427-057-260',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-15 23:31:39', '2009-10-15', 2, NULL),
(36, 'Bob', 'Davis', 'bob123', 'gpeaton@hotkey.net.au', 1, '0427-057-260',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-16 22:07:04', '2009-10-16', 1, NULL),
(37, 'Bob', 'Hall', 'bobbyboo12', 'bobbyboo@mail.com', 0, '(03) 9431-2145',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-23 14:58:57', '2009-10-16', 2, 'img-37-
1.jpg'),
(38, 'Titan', 'Tester', 'testuser', 'test@mail.com', 1, '(03)9434-2323',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-23 10:42:44', '2009-10-22', 2, 'img-38-
4.jpg'),
(39, 'Peter', 'Tester', 'PufferPete', 'puff@mail.com', 1, '(03) 9232-9900',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-10-23 13:25:21', '2009-10-23', 1, 'img-39-
1.jpg'),
(40, 'Dobby', 'Doody', 'dobby', 'dobby@mail.com', 1, '(03) 9431-2244',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-11-12 23:04:43', '2009-11-12', 2, 'img-40-
4.jpg'),
(41, 'Davis', 'Peterson', 'davis', 'davis@mail.com', 1, '(03) 9421-2323',
'eab4e43802157a764b0374d5bedb6b81a81a5032', '2009-11-13 00:45:13', '2009-11-13', 1,
'default.jpg');

--
--
-- Table structure for table `forumanswer`
--

DROP TABLE IF EXISTS `forumanswer`;

```

```

CREATE TABLE IF NOT EXISTS `forumanswer` (
  `questionID` int(4) NOT NULL,
  `aID` int(4) NOT NULL auto_increment,
  `custID` int(10) NOT NULL,
  `answer` longtext collate latin1_general_ci NOT NULL,
  `aDateTime` datetime NOT NULL,
  PRIMARY KEY (`aID`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COLLATE=latin1_general_ci AUTO_INCREMENT=10 ;

--
-- Dumping data for table `forumanswer`
--

INSERT INTO `forumanswer` (`questionID`, `aID`, `custID`, `answer`, `aDateTime`) VALUES
(1, 1, 37, 'i know!', '2009-10-17 22:43:44'),
(1, 2, 37, 'i know!', '2009-10-17 22:43:56'),
(1, 3, 37, 'yes i know', '2009-10-17 22:44:47'),
(3, 4, 37, 'yes 2', '2009-10-18 20:56:24'),
(1, 5, 37, 'yes4', '2009-10-18 21:05:29'),
(3, 6, 37, 'maybe 3', '2009-10-18 21:07:14'),
(3, 7, 29, 'My mail shows OK', '2009-10-24 10:23:02'),
(4, 8, 29, 'I found the answer here "link"', '2009-10-24 10:28:27'),
(5, 9, 41, 'Try the Loco Shed!!', '2009-11-13 00:52:29');

--
-- Table structure for table `forumquestion`
--

DROP TABLE IF EXISTS `forumquestion`;
CREATE TABLE IF NOT EXISTS `forumquestion` (
  `questionID` int(4) NOT NULL auto_increment,
  `topic` varchar(255) collate latin1_general_ci NOT NULL,
  `detail` longtext collate latin1_general_ci NOT NULL COMMENT 'Question or topic detail.',
  `custID` int(10) NOT NULL COMMENT 'As in the customer details table.',
  `qDateTime` datetime NOT NULL,
  `viewCount` int(4) NOT NULL,
  `replyCount` int(4) NOT NULL,
  PRIMARY KEY (`questionID`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COLLATE=latin1_general_ci AUTO_INCREMENT=7 ;

--
-- Dumping data for table `forumquestion`
--

INSERT INTO `forumquestion` (`questionID`, `topic`, `detail`, `custID`, `qDateTime`,
`viewCount`, `replyCount`) VALUES
(1, 'Help!!!', 'adsfasdf', 37, '2009-10-17 19:04:43', 10, 4),
(3, 'No mail show', 'adfa asdfasdf', 37, '2009-10-18 12:53:36', 26, 3),
(4, 'What do I do next?', 'Nisi ut aliquid ex ea commodi consequatur? Cum soluta nobis est
eligendi optio neque porro quisquam est, sed quia consequuntur magni dolores eos. Similique
sunt in culpa qui officia deserunt mollitia animi, totam rem aperiam, sed ut perspiciatis
unde omnis. Dignissimos ducimus qui blanditiis nemo enim ipsam voluptatem et molestiae non
recusandae. Atque corrupti quos dolores et quas molestias quis autem vel eum iure
reprehenderit omnis voluptas assumenda est. Similique sunt in culpa qui officia deserunt
mollitia animi, eaque ipsa quae ab illo inventore veritatis excepturi sint occaecati
cupiditate non provident.', 39, '2009-10-23 13:18:16', 23, 1),
(5, 'Where do I find Australian locos', 'Where do you get em?', 40, '2009-11-12 22:37:55',
6, 1),

```

```
(6, 'How do I connect DCC to my layout?', 'I am starting a new layout with DCC but where do I start?', 41, '2009-11-13 00:55:53', 0, 0);
```

```
-- -----
```

```
--  
-- Table structure for table `prodcats`  
--
```

```
DROP TABLE IF EXISTS `prodcats`;  
CREATE TABLE IF NOT EXISTS `prodcats` (  
  `catID` tinyint(3) unsigned NOT NULL auto_increment,  
  `superCatID` tinyint(3) NOT NULL,  
  `nameLong` varchar(255) collate latin1_general_ci NOT NULL,  
  `name` char(10) collate latin1_general_ci NOT NULL,  
  `description` varchar(255) collate latin1_general_ci default NULL,  
  PRIMARY KEY (`catID`)  
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COLLATE=latin1_general_ci AUTO_INCREMENT=103 ;
```

```
--  
-- Dumping data for table `prodcats`  
--
```

```
INSERT INTO `prodcats` (`catID`, `superCatID`, `nameLong`, `name`, `description`) VALUES  
(100, 100, 'Locomotives', 'Locos', 'Locomotives, all power forms. '),  
(101, 100, 'Steam ', 'SteamLocos', 'Steam locomotives of all varieties'),  
(102, 100, 'Diesel ', 'DieselLoco', 'Diesel Locomotives of all types');
```

```
-- -----
```

```
--  
-- Table structure for table `products`  
--
```

```
DROP TABLE IF EXISTS `products`;  
CREATE TABLE IF NOT EXISTS `products` (  
  `prodID` smallint(5) unsigned NOT NULL auto_increment,  
  `brand` varchar(25) collate latin1_general_ci NOT NULL,  
  `name` varchar(255) collate latin1_general_ci NOT NULL,  
  `description` text collate latin1_general_ci,  
  `cost` double(10,2) default NULL,  
  `stockOnHand` int(10) unsigned default NULL,  
  `catID` tinyint(3) unsigned NOT NULL,  
  `imageFName` varchar(20) collate latin1_general_ci default NULL,  
  UNIQUE KEY `prodID` (`prodID`)  
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COLLATE=latin1_general_ci AUTO_INCREMENT=1008 ;
```

```
--  
-- Dumping data for table `products`  
--
```

```
INSERT INTO `products` (`prodID`, `brand`, `name`, `description`, `cost`, `stockOnHand`,  
  `catID`, `imageFName`) VALUES  
(1000, 'Hornby', 'HORNBY R2690 NRM LSWR 4-4-0 Class T9 R2690', 'Running Number: 120 Livery:  
Maunsell SR Green\r\nPeriod: NRM Cab Type: Narrow Tender Type: Water Cart\r\nLength:  
229mm\r\nFinish: Pristine\r\nMotor: 5 pole skew wound. Loco drive\r\nFeatures: Individual  
Cab Components. DCC Decoder socket in tender Available\r\nDCC Ready (2008 Catalogue) ',  
176.45, 23, 101, 'r2690-5073.jpg'),  
(1001, 'Hornby', 'HORNBY R2355A BR 0-6-0 CLASS Q1 HR2355A', 'Length: 222mm; Running number:  
33013; Livery: BR black; Period: Early 1950s; Features: Cab detail, brake rods, DCC ready;  
\r\nFinish: Pristine; Motor: 5 pole skew wound loco drive; Purpose: Freight; Suitable
```



```

rolling stock: Wagons of the period.\r\n\r\nPROTOTYPE HISTORY\r\nClass Introduced: 1942;
Loco Weight: 51tons 5cwt; Driving Wheels: 5ft 1in. ', 175.00, 44, 101, 'r2355-3020.jpg'),
(1002, 'Hornby', 'HORNBY R2708 BR 4-6-2 ''Padstow'' Rebuilt West Country R2708', 'Livery:
Late BR Green\r\nPeriod: 1960 to 1967\r\nLength: 272mm\r\nFinish: Pristine\r\nMotor: 5 pole
skew wound. Loco drive\r\nFeatures: Sprung buffers, brake rods. Cab and tender
detail\r\n\r\nDCC Ready (2008 Catalogue) ', 205.00, 20, 101, 'r2708.jpg'),
(1003, 'Hornby', 'HORNBY R2712 BR 4-4-0 Class T9 R2712', 'Running Number: 30724 Livery:
Early BR Black\r\nPeriod: 1949 Cab Type: Narrow Tender Type: Water Cart\r\nLength:
229mm\r\nFinish: Pristine\r\nMotor: 5 pole skew wound. Loco drive\r\nFeatures: Individual
Cab Components. DCC Decoder socket in tender Available\r\nDCC Ready (2008 Catalogue) ',
155.00, 12, 101, 'r2712-5067.jpg'),
(1004, 'Hornby', 'HORNBY R2733/X SR 0-4-4T Class M7 R2733/X', 'Livery: Malachite\r\nPeriod:
1937\r\nLength: 139mm\r\nFinish: Pristine\r\nMotor: 5 pole skew wound. Available\r\nDCC
Ready & DCC Fitted (2008 Catalogue) ', 155.00, 20, 101, 'r2733.jpg'),
(1005, 'Hornby', 'HORNBY R2828 GWR 4-2-2 ''Duke of Edinburgh'' Dean ''3031'' Achilles
Class', 'HORNBY R2828 GWR 4-2-2 ''Duke of Edinburgh'' Dean ''3031'' Achilles Class - Limited
Edition of 2000 (2009 Catalogue) R2828', 2150.44, 2, 101, 'r2828-6407.jpg'),

(1006, 'Hornby', 'HORNBY R2827 NRM SR 4-4-0 ''Cheltenham'' Schools Class R2827', 'Length:
238mm Detail: Extensive Cab Detail Special features: DCC ready/fitted, Decoder socket in
tender Motor: 5 pole skew wound Curved track: Hornby 2nd radius + / 438mm+ Available: 3rd
quarter (2009 Catalogue) ', 150.00, 2, 101, 'r2827-6147.jpg'),
(1007, 'Branchline-Bachman', 'BACHMANN 45XX Prairie Tank 4507 BR Lined Green L/Crest (DCC On
Board) bach32-125DC', 'The ''Peaks'', or as they were recognised officially Classes 44, 45
and 46, were originally designated Type 4 power classification on their introduction. Built
at Derby works, they were ordered as part of the BTC 1955 Modernisation Plan and went into
service in 1959. The original ten locomotives (D1-D10), which formed Class 44, acquired the
generic name ''Peaks'' from names bestowed upon them from English and Welsh mountains or
hills. Subsequent orders were placed for Type 4 locomotives of basically the same general
external appearance with noticeably different front ends, for which there were four
differing designs. The second Type 4 in the series (Class 45), also Derby-built was
originally numbered D11-D137. In true Midland tradition, a number of these had regimental
names carried originally by LMS Royal Scot Class steam engines. They were, nevertheless,
still referred to as ''Peaks''. Their horsepower rating was 200 h.p greater than that of
their Class 44 predecessor. The third member of the ''Peak'' family was the Class 46, built
1961-3 at Crewe with Brush traction motors. The number series D138-193 brought the number of
''Peaks'' in traffic to 193. All of these were un-named with the exception of just one,
which also received the name of a military regiment. The first ''Peak'' withdrawal took
place in June 1977 due to collision damage and by 1980 all ten of the original Class 44s
that gave name to the class were extinct. ', 175.00, 2, 101, '32-125dc.jpg');

```

```

CREATE USER 'locophpuser'@'localhost' IDENTIFIED BY 'student';

```

```

GRANT USAGE ON locoshed.* TO 'locophpuser'@'localhost' WITH MAX_QUERIES_PER_HOUR 0
MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0 MAX_USER_CONNECTIONS 0 ;

```

```

GRANT SELECT , INSERT , UPDATE , DELETE , CREATE , DROP , INDEX , ALTER , CREATE TEMPORARY
TABLES , CREATE VIEW , SHOW VIEW , CREATE ROUTINE, ALTER ROUTINE, EXECUTE ON `locoshed` . *
TO 'locophpuser'@'localhost';

```

PHP User

For the PHP code to function a user must be created in the MySQL database. As for the database creation, you must be logged in as the *root* user.

```

GRANT ALL ON locoshed.* TO locophpuser@localhost
IDENTIFIED BY 'student';

```

Server Folder Tree

Figure 11 is the folder structure on the server. Most of the PHP files are in the site root folder. The files are described in Table 1 Server Root file descriptions. The *mysql_connect.php* file is kept in the server root, out of reach of the web server space. This helps prevent malicious damage from users.

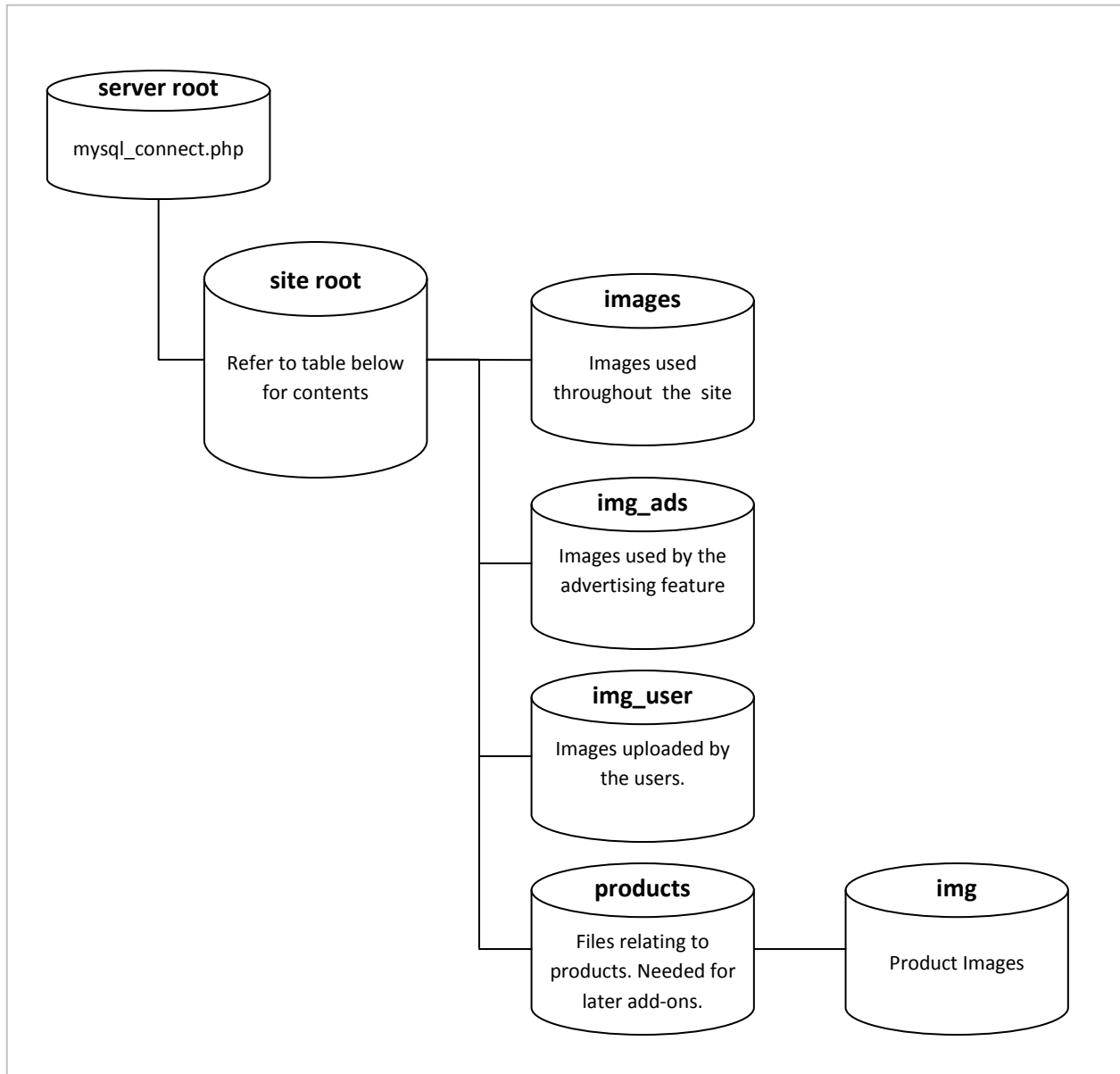


Figure 11 Folder layout and contents on the server.

Table 1 Server Root file descriptions

File Name	Description
aboutus.php	About Us page
advice.php	Advice page
contactus.php	Contact Us page
fmaddanswer.php	Forum -add answer to topic page.
fmaddtopic.php	Forum -add topic to forum page.
fmcreatetopic.php	Forum -shown after a topic is successfully created.
fmmain.php	Forum –main page.
fmviewtopic.php	Forum -view topic page after topic is created.
footer.html	The footer of each page. Inserted using PHP.
functions.php	Common functions. Mainly formatting of phone number etc.
header.html	The header of each page. Inserted using PHP.
index.php	Default main page.
links.php	Links page, not in use
loggedin.php	Displayed after a successful login
login.php	Prompt the user to log in.
logout.php	Displayed after user is logged out.
myaccount.php	Edit the user account details. This differs from the register.php page as it allows the user to upload an image.
newcustinfo.php	Displayed after a customer registers.
noentry.php	Displayed if a user attempts to go to a restricted page when they are not logged in. Not yet implemented.

File Name	Description
passwordchng.php	Allow user to change password.
privacypol.php	Privacy policy page.
prodsrchres.php	Product search result page.
products.php	General information about The Loco Sheds products.
register.php	New customer registration page.
sidebar.html	The left hand navigation bar. Common to all and inserted using PHP.
sitemap.php	Site map of The Loco Shed web site.
sitestyle.css	CSS styles common to whole site.
tos.php	Terms of Service.

Site Map

Figure 12 The Loco Shed site map shows the site map for The Loco Shed. Note that the sections greyed out will not feature in the initial release.

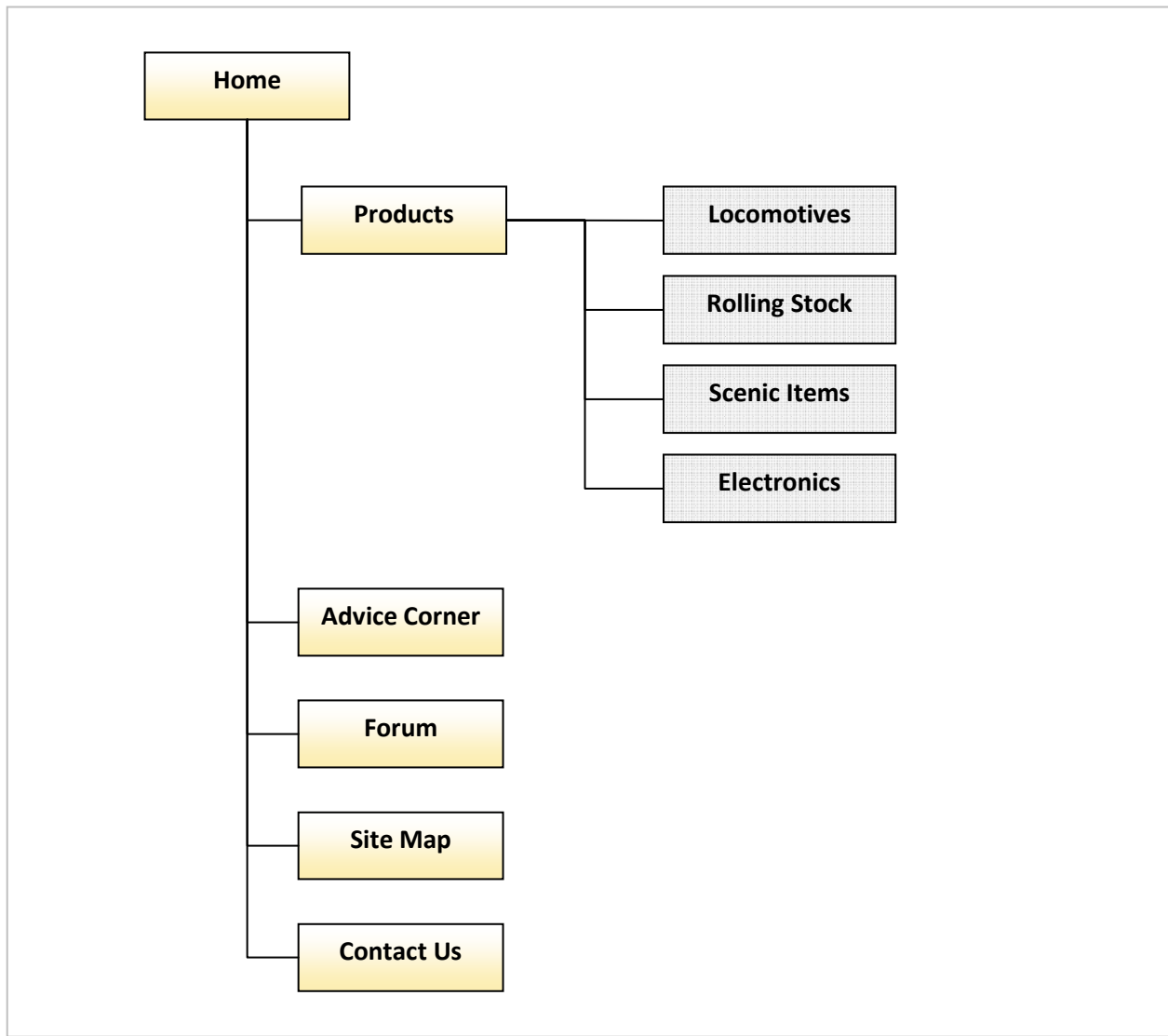


Figure 12 The Loco Shed site map

Data Dictionary

As discussed earlier the database will be implemented using MySQL. The database shall be called *locoshed*.

The PHP scripts will access the database using the following user name and password.

User: locophuser

Password: student

This user needs to have full access to the database *locoshed*.

List of Tables

	Table Name	Description
1	ProdCat	Product Categories. Can also hold super categories.
2	Product	Product information
3	ForumAnswer	Answers to questions in the forum
4	ForumQuestion	Questions posted in the forum
5	Customer	Customer/user details

ProdCat Table

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
1	catID	AutoNum	Integer	Yes		Category Number	Yes
2	superCatID	Integer			ProdCat		
3	nameLong	Text	50			Category Name	
4	name	Text	50			Short name	Yes
5	description					Description	

Product Table

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
1	prodID	AutoNum	Long Integer	Yes			Yes
2	name	Text	50				Yes
3	description	Text	50				Yes
4	stockOnHand	Integer	50			This won't be used initially.	Yes
5	catID	Integer	4		ProdCat		Yes

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
6	imageNo	Integer	4			Points to an image in the /products/images directory	Yes

ForumAnswer Table

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
1	questionID	AutoNumber	Long Integer		ForumQuestion		Yes
2	aID	Text	50	Yes			Yes
3	custID	Text	50			Nickname or user name of the answer poster	Yes
4	aAnswer	Text	50				Yes
5	aDateTime	Text	4				Yes

ForumQuestion Table

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
1	questionID	AutoNum	Long Integer	Yes			Yes
2	topic	Text	50				Yes
3	detail	Text	50				Yes
4	custID	Text	50			Nickname or user name of the question poster	Yes
5	qDateTime	Text	4				Yes
6	viewCount	Text	50				Yes
7	replyCount	Text	50				Yes

CustomerDetails Table (or User Table)

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
1	custID	AutoNumber	Long Integer	Yes		Unique number for each user (or customer)	Yes
2	firstName	Text	50				Yes
3	lastName	Text	50				Yes

	Field Name	Type	Length	Primary Key	Foreign Key	Field Description	Not Null
4	userName	Text	50				Yes
5	nickname	Text	4			Not in use.	No
6	email	Text	50				Yes
7	showEmailOK	Boolean	50				Yes
8	phoneNo	Text	50				
9	password	Text	10				
10	datetimeLastVisit	DateTime	50				
11	dateJoined	DateTime	Long Integer		Industry		Yes
12	noVisits	Yes/No					

References

Mize, S. R. (2007). Social Network Benefits [Electronic Version]. *Ezine Articles*. Retrieved 13-Nov-2009 from <http://ezinearticles.com/?Social-Network-Benefits&id=464645>.