QM Web

**(Question Mark
for the Web)**

User guide

Version 1 - October 1995

Authorship
QM Web was created by Paul Roberts.

Trademarks
Question Mark is a trade mark of Question Mark Computing Ltd. Many of the
product and other names referred to in this manual are also trade marks, which
we hereby acknowledge.

Patents
The QM Web software is licensed under US Patent No. 4,558,302 and foreign
counterparts.

ISBN
The ISBN for Version 1 of QM Web is 1 872089 19 4.

Licence agreement and warranty
Please read the licence agreement and limited warranty on the following pages.

Published by
This manual is printed by Ridgeway Press in the UK. QM Web is published by:

UK/International	North America:
Question Mark Computing Ltd.	Presence Corporation
5th Floor, Hill House	5 Hillandale Avenue
Highgate Hill	Stamford, CT 06902-2800
London N19 5NA	USA
United Kingdom	
Tel: (0171) 263 7575	Tel: 800 863 3950 or (203) 358 3950
Fax: (0171) 263 7555	Fax: 800 339 3944 or (203) 358 3944
e-mail: qmark@cix.compulink.co.uk	e-mail: info@questionmark.com
Web: http://www.qmark.com/	Web: http://www.questionmark.com

Basic QM Web software licence agreement

This licence agreement covers Basic QM Web. For Question Mark Designer for Windows, please see the user manual for that product. A separate agreement covers the QM Web On-line Scorer.

Please read this agreement before using this software. By using the software or opening the envelope containing the master disks, you accept the licence conditions. If you are unwilling or unable to accept this agreement, promptly return the package (unopened and unused) to your supplier for a full refund.

Grant of licence

In consideration of and subject to your payment for this software, and subject to your agreeing to abide by the terms of this licence agreement, Question Mark Computing Limited (QMCL) grants you a non-exclusive, non-transferable licence to use the Basic QM Web software under the limitations set out below.

1.   The Basic QM Web software (files WEBQUES.EXE, WEBANS.EXE) may be used on one personal computer or workstation only. It may not be used on a server computer.

2.   You may make one copy of the program disks for back-up purposes.

Ownership

The software including user documentation is copyright QMCL. On purchase, you acquire title to the physical packaging, including disks, but the software and any copies made of the software in any form and on any media remain the property of QMCL.

You may not copy the user documentation. All copies of the software made must include the copyright notice. You agree to effect and maintain adequate security measures to safeguard the software from theft or unauthorised access, and you understand that the software includes confidential information belonging to QMCL, and you accept that you owe QMCL a duty of confidence in relation to this information.

You may not sub-licence, rent, lease, sell or re-sell any of the software in any way in whole or part, either temporarily or permanently. In particular you may not put the software into a library for borrowing, even within a college library. Except as permitted by law, you may not decompile, translate, reverse engineer, create a derivative work or otherwise use or copy the software or any part of it, unless permitted within this agreement.

Limited warranty

We, QMCL, warrant that the disk(s) on which the software is provided are free from defects in materials or workmanship for a period of 90 days from your purchase. We shall replace any disk which does not meet this warranty and which is returned to us within such period. Apart from this warranty the software and manual are both supplied "as is" without any condition or warranty, express or implied, statutory or otherwise, as to quality or fitness for any purpose or for error-free operation. Because of the diversity of conditions and hardware under which the software may be used, you are advised to test it thoroughly before relying on it. In no event will we be responsible for any loss or damage whatever or however caused (including but not limited to economic or consequential loss) arising directly or indirectly in connection with the software and/or manual, their use or misuse or otherwise, except for liability in respect of death or personal injury caused by our negligence or that of others for whom we are legally responsible or for any other liability which it is unlawful to exclude.

Under no circumstances will QMCL's liability exceed the price paid for the product. We will offer free telephone support to deal with any problems with the software in normal business hours for a period within 90 days from your purchase. We may offer free support thereafter, but we are not contractually obliged to.

Term

This licence is effective until terminated. You may terminate it at any time by destroying all the copies of the software and documentation. QMCL will have the right to terminate your licence immediately if you are in material breach of any of its terms. Upon such termination, you must destroy all and any copies of the software and documentation.

General

This agreement is the entire agreement between the parties, and QMCL does not accept any variation of these terms including any purportedly made by any purchase order or other document used by you. This agreement may only be superseded by a written agreement signed by a director of QMCL. You may not assign this licence agreement without QMCL's prior written consent. No delay or omission of QMCL in exercising any right or remedy in whole or part shall be construed as a waiver of it, to operate so as to limit or preclude any further or other exercise of it. This agreement shall be governed by and construed in all respects in accordance with English Law.

Table of Contents

5.   Analysing the results

1.   Getting started

1.1   Introduction

Welcome to QM Web, the world's first ever software package for delivering tests and surveys on the World Wide Web.

*   In education, you can use QM Web to assess people as part of distance learning, to check knowledge on course work, as a revision or diagnostic exercise, or to make self-assessments or quizzes.

*   In business training, you can assess your staff on product knowledge or company procedures.

*   In surveying or market research, you can easily find out what your employees or customers think worldwide. You can also conduct opinion polls, and show the current results on-line on the Web.

*   In recruitment, you can test the knowledge or aptitude of job candidates, or gather information to select people to interview.

*   In any other field, if you need to ask questions on the Web, and get back the answers and analyse them, QM Web can help you.

This user guide describes the QM Web software. Please read section 1.2 which introduces you to QM Web, and then follow the instructions in section 1.3 on how to install the software. Then look at section 1.4 on how to start using the software.

1.2   Overview

1.2.1   Basic concepts

Using QM Web is a simple and easy process. You do not need any specialised computing or Web knowledge. Some basic concepts are introduced below.

The *Internet* is a worldwide, public network that connects many computers worldwide. Each computer on the Internet has its own address, and you access a computer by quoting its address. Internet connections are not dependent on geography, and it is as easy to connect to a computer in the same town as it is to another across the world.

One use of the Internet is for electronic mail (or *e-mail*) messages.

Another use is for the *World Wide Web* (or *Web*). Many computers on the Internet hold information or run services that are accessible on the Internet; these computers are called *servers*. It is very common for servers to links to each other, making for powerful connections and giving rise to the "Web" name for this part of the Internet.

HTML is a common format used on the Web for documents. A *browser* program lets you look at HTML documents on the Web and see them on your computer. Well-known browser programs are Netscape and Mosaic, but because the HTML language is standard, you can use any browser to access the Web. Using a browser you can access any HTML document on any server on the Internet, and follow any links to other servers.

QM Web lets you create your own tests and surveys in HTML format. You can then put them on a Web server. People access the tests or surveys using their browser, from their computer,

which can be anywhere in the world with an Internet connection.

Their answers can either be sent back to you by e-mail over the Internet, or else the answers can be instantly marked and stored on the server computer. If you mark the answers on the server, people can see immediate feedback on their answers.

If you have Internet access and a Web browser, you are strongly recommended to look at our Web server to get an idea of what you can do with QM Web. Our Web address for you to type into your browser is:

http://www.qmark.com/

1.2.2   What QM Web consists of

There are three Question Mark programs you may need to use.

- *Question Mark Designer for Windows* is a general purpose Windows testing and assessment program. You use it for creating the tests or surveys prior to converting for the Web, and for analysing answers.

- *Basic QM Web* is the Windows software you need in addition to Question Mark Designer for Windows. The software converts tests and surveys to Web format, and converts back answers to Question Mark format.

- If you want to store or mark answers on a Web server (rather than have them returned for marking by e-mail) then you need to use the *QM Web On-line Scorer*. This runs on the server, scores answers, saves the results, and can give instant feedback.

This user guide fully documents Basic QM Web. It describes

how to set up tests and surveys for using the On-line Scorer, but instructions on setting up this software on your server are supplied separately.

This user guide introduces using Question Mark Designer for Windows for making Web tests and surveys, but full documentation for this program is provided separately.

1.2.3   Creating tests and surveys

To create a test or survey, you start off using Question Mark Designer for Windows. You can create questions in multiple choice, multiple response or text answer formats, with as much text and graphics as you need. Advanced users can include links to other pages or other HTML in the text if desired.

You then convert the Question Mark Designer file using the Basic QM Web question converter into the following files which are used to deliver the test on the Web.

- An HTML file containing the questions and the instructions on what to do with the answers.

- A graphics file (in .GIF format) for each graphic used in the test.

- A "secret" .QXM map file that is used in the test marking.

People taking tests see the HTML and GIF files, but do not see the map file. The HTML and GIF files do not contain any information as to which answers are right or wrong. You should keep the map file secure as it contains all the marking information for the test.

You are free to distribute the HTML, GIF and map files as

widely as you wish.

1.2.4   Delivering tests and surveys

There are several different ways of test delivery. In all cases the test or survey taker just needs a Web browser (eg Netscape or Mosaic) and an Internet connection.

The first two options require just Basic QM Web. The later options need access to the QM Web On-line Scorer.

All e-mail

You put the HTML and GIF files on a floppy disk or send them by e-mail. Test answers are e-mailed back to you. You keep the map file on your PC, and mark answers when they are returned.

Server & e-mail

You put the HTML and GIF files on your Web server, and test answers are e-mailed back to you. Again you keep the map file on your PC, and mark answers when they are returned.

Use our server

You send us all the files (HTML, GIF and map) and people take the test entirely on our server.

Use your server

You put all the files and the QM Web On-line Scorer software on your server and people take the test entirely on your server.

Use both servers

You put the HTML and GIF files on a Web server, send us the map file and use the QM Web On-line scorer software on our server. People take the test by accessing your server, but the answers are marked and stored on our server (transparently to

the user).

1.2.5   Analysing the answers - results returned by e-mail

If answers are sent by e-mail, you process the answers using the answer converter in Basic QM Web. This references the map file for the test on your computer to mark the answers, and creates a Question Mark answer file. You can view, analyse and export answer files using the Question Mark Designer for Windows reporting software.

This unique mechanism allows you to test on the Web with minimal equipment and maximum security. You publish the test in the same way as any other HTML document - you don't need any special facilities or the On-line Scorer software on the server. And to receive answers, all you need is a standard e-mail address.

1.2.6   Analysing the answers - marking on a server

If you use the On-line Scorer software to analyse results on the server, then you have several different ways of analysing the answers.

- In a test or assessment, people can see instant feedback on their answers, including individual feedback on each question, a final score and a message defined by you for that score band.

- In a survey or opinion poll, people can see an analysis of all answers so far, with the percentage of people choosing each answer shown.

- You can also store the complete answers on the server, and convert them into answer files for detailed analysis or

export by Question Mark Designer for Windows.

- You can also make a results file on the server with one line for each person taking the test or survey containing their name, score and the date and time they made their answers. You can show this to people taking tests or access it yourself.

1.3   Installing QM Web

1.3.1   Hardware and software needed

Before using QM Web, check through the requirements below and make sure that you have the hardware and software you need.

Creating tests and surveys

To use QM Web to create tests or surveys, you need:

- A PC with Windows 3.1 or higher or Windows '95 and a hard disk, mouse and at least 4Mb of memory (8Mb recommended).

- A copy of Question Mark Designer for Windows, Version 2 or later.

- Basic QM Web.

When creating material, it is also useful to have the facilities to answer tests and surveys (described below) so you can try out what you have made.

Answering tests and surveys

People answering tests and surveys need:

- An Internet (IP) connection.

- A Web browser that is compliant with the HTML 2.0 specification, ie that supports forms. This includes any version of the Netscape or Mosaic browsers and most other browsers, running on any kind of computer including PC, Macintosh and UNIX computers.

People taking tests or surveys do not need any Question Mark software loaded on their computer.

Delivering with answers returned by e-mail

To deliver and analyse tests and surveys with answers returned by e-mail, you need (in addition to what you need for creating tests and surveys):

- A Web server to mount the HTML test or survey on. (Or if you do not have this, you can distribute the HTML document by e-mail or floppy disk.)

- An e-mail address for answers to be sent to.

Delivering with answers marked on a server

To deliver and analyse tests and surveys with answers marked on a server, you need (in addition to what you need for creating tests and surveys):

- Access to the QM Web On-line Scorer, either on your own server or on our server.

- A server to mount the HTML and map files on. Again this can be your server or ours.

- You also need some way to retrieve the answers and results from the server, for example an Internet connection and Web browser.

1.3.2   Installing Basic QM Web onto your PC

You should usually install Question Mark Designer for Windows *before* installing Basic QM Web.

For an automatic installation of Basic QM Web:

1. Put the Basic QM Web disk into floppy drive A: or B: of your PC. (If there is more than one disk, put the first one in.)

2. Go into Windows File Manager, click on drive A: or B: and double-click on file SETUP.EXE. This runs the automatic installation program for QM Web.

3. Follow the on-screen instructions. The Setup program will copy the QM Web files to the same directory used by Question Mark and add icons for QM Web into the Question Mark Designer group.

1.3.3   Basic QM Web file list

Basic QM Web contains these files:

- WEBQUES.EXE, the Web question converter program that converts test files for the Web.

- WEBANS.EXE, the Web answer converter program, that makes answer files from Web answers.

- The QMWEB.HLP help file for these programs, and the

QMWEBTUT.HLP standalone tutorial help file.

- QMWEB.INI, the initial preferences used by the Web conversion programs.

- LEAD50.DLL, a support program for WEBQUES.EXE.

- README.WEB, a text file containing the latest information on the software.

- Various .GIF files which can be used to add graphical bullet points into tests.

- Files starting with SETUP which are used for the automatic installation program.

If you prefer to manually install Basic QM Web on your PC, you can do so by copying all the files on the disk(s) except files with names starting "SETUP" into the Question Mark directory, usually \QDESIGN. You should copy file QMWEB.INI into your C:\WINDOWS directory. You can then make icons in Program Manager for the QM Web programs, WEBQUES.EXE and WEBANS.EXE.

Check the README.WEB file for any last minute information.

1.4   Getting started

Please make sure to read the text file README.WEB on the first distribution disk for the latest information on QM Web. If you install the software automatically, the software will offer to show you this file.

Some possible ways of getting started in using QM Web are:

- Run the on-line tutorial, a Windows help file that guides you through the process of creating a test, converting it for the Web, and running it. You run the tutorial by double-clicking on its icon from Program Manager, or by selecting the file QMWEBTUT.HLP in File Manager and using **File | Run**.

- Just use the software, calling on the on-line help or this user guide if you get stuck.

- Read the rest of this user guide first.

  - Chapter 2 describes using Question Mark Designer for Windows for making a test or survey.

  - Chapter 3 describes using the Basic QM Web question converter to convert the test to Web format.

  - Chapter 4 describes how to distribute the test or survey, and how people answer tests and surveys.

  - Chapter 5 shows how to analyse answers from Web tests and surveys.

Please remember to take a backup copy of all files that you make in case you make a mistake or your computer fails.

Please also make sure to get someone else to try out or pilot your test or survey before releasing it widely.

2.   Creating questions in Question Mark Designer

2.1   General principles

Using Designer, you make (.QDT) test files containing your questions. These can then be delivered on Windows PCs using the Presenter software, or converted by the QM Web question converter (WEBQUES.EXE) into Web format.

The content of the test (eg question wording and scores etc.) are converted, but not the layout (eg fonts, colours). This means that when creating questions for the Web, it doesn't matter how you lay them out, just what you put in them. You can convert existing Windows tests and surveys, and if you do so, the content will be converted, but the layout will be lost.

Section 2.2 describes the process of creating new tests for the Web, and is aimed at people who are new to Question Mark Designer for Windows. Please refer to the Designer manual for full information on the software.

Section 2.3 documents the features in Designer not supported on the Web. Existing users of Question Mark can see how to amend their tests to make conversion possible, and all users can check that they are only using features which will work on the Web.

2.2   Creating tests and surveys for the Web

2.2.1   Creating, saving and opening test files

When you first run Designer, you see the Designer Desktop which lets you manage test files. When a test is open here, you see an overview of the test. From the Desktop, you can access the Question Editor to set up each question in detail.

To leave Designer, you use **File | Exit**, or click on the toolbar icon.

Making a new test

To make a new test, you use **File | New** (or click on the toolbar icon). You give the test a name (up to 34 characters), and the software suggests a file name and path to store the test in, which you should usually accept by clicking on **OK**.

You then see a control information dialog, which allows you to set the way the test works under Windows. You can ignore these settings, as they do not apply in the Web and just press **OK**.

Saving a file

To save a file, you use **File | Save**, or click on the toolbar icon.

When you exit Designer, you will be offered a chance to save any unsaved files.

Opening an existing test

To open an existing test that you have saved earlier, you use **File | Open**, or click on the toolbar icon. You choose which file to open by selecting its file name.

2.2.2   Creating and editing questions

A test can contain up to nearly 1000 questions.

Question types

There are four question types which you will find most useful when making tests and surveys for the Web.

In a *Multiple Choice* question, the user selects one answer from a choice of several answers.

In a *Multiple Response* question, the user selects one or more answers from a choice of several answers.

In a *Text Match* question, the user answers with up to one line of text.

You can also use *Explanation* questions, which contain text and graphics presented to the user, without any response required.

Making a new question

To make a new question, you use **Build | Question**, and choose the question type (or else you can use one of the toolbar icons).

You then choose from a series of pre-defined styles to start the question off from. For questions for the Web, you should choose one of the earlier plain text styles on the list, as the later styles use layouts (eg using rich text and graphics) designed for Windows not the Web. You can also make your own styles if you prefer.

Editing a question

To edit an existing question, simply double click on it from the Desktop, or select it and use **Build | Open Block**.

Setting the order of questions

Questions are shown to the person answering them in the order they are in the test file.

New questions are inserted after the current question. You can change the order of questions by copying or cutting questions and then pasting them back.

2.2.3   Using the Question Editor

The Question Editor is a full-screen WYSIWYG editor that lets you define the content and layout of a question for Windows presentation

You should just concentrate on the content of the question when creating for the Web, and largely ignore layout issues. Any settings you make for font, styling, colour will be ignored on conversion to the Web, and the positions of text and graphics may change.

All the text, graphics and choices that make up the question are considered separate components in the Question Editor. You can add new text components with **Edit | Add Text** and insert .BMP or .PCX graphics files with **Edit | Add Graphics**.

- You edit the text in a component by double-clicking on it. For example to change the question wording, you should double-click on the wording box, enter your new text, and select **Close**.

- Each component has a menu associated with it, that lets you control all the features of it. You access this menu by clicking with the *right* mouse button. For example, to delete a text component, you select it and click with the right mouse button, and choose **Delete**.

To save the question and return to the Designer Desktop, you use **File | Close**, or the toolbar icon.

2.2.4   Multiple Choice questions

In a Multiple Choice question, you can define as much text and graphics as you want for the question wording, and then you define the choices.

You can have up to 40 choices. To add a choice use **Question | Add Choice**. To remove a choice, click on it with the right mouse button and select **Delete**.

- To set the text for a choice, double click on the text and change it. If you have a lot of wording to fit in, change the size of the choices window or use a small size font. (This will not have any impact on the final Web test as all that matters is the content of the question, not its layout in this Windows software.)

- To set the score for a choice, double click on the score number, and change it, or click on the choice with the right mouse button and select **Score**. The score for the question will be zero if the question is unanswered, and otherwise the score for the answer chosen. All scores can be zero, if you do not want to mark the question.

- If you are using the On-line Scorer to give feedback to people taking a test, you can define an individual feedback message for each choice. To set this, click on the choice with the right mouse button and select **Feedback**.

One option in the choices component right mouse menu is **Shuffle Order**. If you set this, then when the question is converted to the Web, the answer order is shuffled randomly. If

you do not set it, the order of the answers will remain the same. This shuffling happens *once only* when the question is converted - not every time it is delivered on the Web.

Each person taking the test will see the answers in the same order. However shuffling is useful to prevent bias in where the right answer is, eg always putting the right answer first.

2.2.5   Multiple Response questions

Multiple Response questions work similarly to Multiple Choice questions.

You define a separate score for each choice, and the user's score for the question is the sum of the scores for the choices selected. If no selection is made, the score is zero. (The Designer **Score** dialog offers a score if a choice is not selected, but this is not used when converted to the Web, so you should ignore this.)

When presenting the question on the Web, there is no way to limit the number of selections the user can make. To prevent someone from just selecting all choices, and getting a maximum mark, you may wish to assign negative marks to wrong choices. (For example, you could assign 1 point to each right choice and -1 to each wrong choice.)

If you define a feedback message in a Multiple Response question, you define the same message for all possible answers.

2.2.6   Text Match questions

In Text Match questions, the user enters a short text answer. The size of the answer area available when answering the question on the Web is fixed.

You can assign scores to possible answers the user might make. You define the answers, the score for each one, and the score for all other answers. For example, if the question is "What is the capital city of Italy?", you could define scores of 1 point for "Rome" or "Roma", and 0 points for all other answers. You don't have to assign answers and scores if not needed (eg for a question like "What is your job title?").

You can also set feedback messages for each possible answer, which can be used if you use the On-line Scorer.

See the Designer user manual or help for how to set the answers and scores in a Text Match question. Note that Web marking ignores letter case, whether or not you set this when creating the question (ie an answer of "Hello" is marked the same as an answer of "HELLO").

2.2.7   Advanced possibilities

Some other possibilities you may wish to consider are:

- You can define score bands in the Final Page of a test, and give different text messages for people achieving different score bands. (For example you could define a band for passing and one for failing, and give different messages.) These messages are only used on the Web if you use the On-line Scorer.

- You may want to use **Question | Description** menu item to set a description for each question. This description is useful in reports to identify questions.

If you have a lot of questions, you may want to use libraries. Look in the Designer user manual for how to use these, and also please see the note on libraries in section 2.3.2 below.

2.3   Changes between Designer and QM Web

2.3.1   Designer features unsupported in QM Web

Not all features in tests you can create in Question Mark Designer for Windows are supported when converted to the Web. This is largely because these features are either impractical or impossible on the Web. The following features are completely unsupported, and all information on them is lost when converting to the Web.

- All control page settings. (Those that have meaning in QM Web are set separately when converting to the Web).

- Multimedia calls and calls to external tests.

- Jumps.

- Hot spot questions.

- Supplementary questions.

- Passwords and Guardian key files.

- The OK or Continue button which the user presses to accept the answer to the question is not needed on the Web, and is ignored.

- Settings for individual questions of **Question | Count Score to Total** or **Question | Show Feedback**.

2.3.2   Designer features changed in QM Web

Question types

All question types except Hot spot are converted, but there are

the following changes.

- Push Button and Multiple Choice questions are treated the same on conversion.

- The **Maximum Selections** setting in Multiple Response questions is ignored. The score for not selecting each choice is also not used, if set.

- The **Case sensitive** setting in Text Match questions is ignored. You also cannot control the font or symbol set used to answer the question.

- Numeric questions are converted as text questions, with one right answer (the numeric right answer in exactly the way it is displayed in Designer) and all other answers as wrong. There is no way of stopping people entering letters rather than numbers as the answer.

  The software will not understand that 25.0 and 25.00 and 2.5E1 are the same thing. And no score is allocated to numbers within a range as in Designer. If you are creating numeric questions from scratch, rather than converting existing questions, you may want to create them as text questions directly.

- Explanation questions are fully converted as text and graphics in the test, but are not included in the Web question numbering.

Random selection and libraries

Random selection of questions from libraries and random shuffling of answers in questions is done once only at the time of converting to the Web. Thus the randomisation is done, but only once for all people who take the Web test.

You can still put questions in libraries, and this can be helpful

to aid organisation of material and answer analysis, but selecting questions at random from libraries is much less useful.

Final page and feedback

Note that the person taking a test will only see the final page information and the feedback messages defined if you are using the On-line Scorer, and if you set these to be displayed in the Response options dialog of the Web question converter.

2.3.3 Layout issues

As well as the above changes, all layout information is lost on conversion to the Web. However you should still find that most existing tests convert satisfactorily for the Web.

- Background colours are ignored.

- All text is considered in the same font and symbol set, and text colour is ignored.

- All graphics are converted, except graphics inside rich text components.

- Text and graphics components in a question are displayed in the Web test sequentially in the order they are top to bottom on the Designer screen (left to right if at the same level).

- All justification and other positioning of components on-screen is ignored.

- Rich text is treated like plain text except that bold, italics, superscript and subscript formatting is preserved. Rich text borders and scroll bars are not used. (Rich text components longer than 3,000 characters are truncated.)
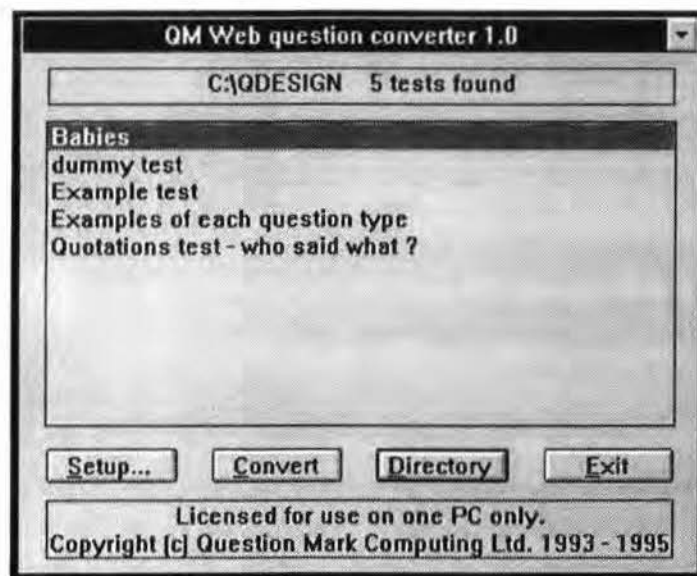
3. Converting questions for the Web

3.1 Using the question converter

3.1.1 Running the converter

The QM Web question converter (WEBQUES.EXE) takes a .QDT test file created with Question Mark Designer for Windows, and converts it for delivery on the Web. You run the converter by double-clicking on its icon from Program Manager, or in any other way that you run programs from Windows.

```
┌─────────────────────────────────────────────┐
│  QM Web question converter 1.0          [▼]  │
├─────────────────────────────────────────────┤
│  ┌───────────────────────────────────────┐   │
│  │     C:\QDESIGN    5 tests found        │   │
│  └───────────────────────────────────────┘   │
│  ┌───────────────────────────────────────┐   │
│  │ Babies                                │   │
│  │ dummy test                            │   │
│  │ Example test                          │   │
│  │ Examples of each question type        │   │
│  │ Quotations test - who said what ?     │   │
│  │                                       │   │
│  │                                       │   │
│  │                                       │   │
│  └───────────────────────────────────────┘   │
│  ┌────────┐ ┌─────────┐ ┌──────────┐ ┌──────┐│
│  │ Setup..│ │ Convert │ │ Directory│ │ Exit ││
│  └────────┘ └─────────┘ └──────────┘ └──────┘│
│  ┌───────────────────────────────────────┐   │
│  │     Licensed for use on one PC only.   │  │
│  │ Copyright [c] Question Mark Computing Ltd. 1993 - 1995 │
│  └───────────────────────────────────────┘   │
└─────────────────────────────────────────────┘
```

The converter shows a list of tests in the current working

directory. In the example above, five tests are available for conversion. You can choose the following options.

- The **Setup...** button lets you control how the conversion is done. See section 3.2 below for full information on the setup options.

- The **Convert** button converts the current test to Web format.

- The **Directory** button lets you look at other directories for .QDT test files to convert.

- The **Exit** button leaves the program.

3.1.2 How conversion works

When converting files, the software makes a file with extension .HTM for the questions in HTML format and a .QXM map file. If the test uses any graphics, these are stored as .GIF files.

The HTML document contains each question in order, with questions separated by a horizontal line. At the end of the document is a "submit" button that the user presses to finish the questions and submit his/her answers.

The name for the .HTM and .QXM file is taken from the .QDT file. (Thus HISTORY.QDT will give rise to HISTORY.HTM and HISTORY.QXM.) The software generates unique names for each .GIF file. If you repeatably convert the same test, you will overwrite the .HTM and .QXM files, but generate new .GIF files.

Please note that the .HTM and .QXM files are a matched pair of files, and that there are special codes in one that refer to the other. Make sure that if you replace one of the pair, you replace

the other. *In particular, to mark the results from an HTML test, you need the original .QXM file made when the HTML file was created; if you don't have it, you can't get back the answers.* Don't overwrite a .QXM file if there are still answers from the test to process and turn into answer files.

3.2   Setup options

3.2.1   Control settings dialog

When you press the **Setup...** button, you see a dialog that allows you to control the way the conversion works. All settings are stored in file QMWEB.INI, which is usually saved in your C:\WINDOWS directory. Thus whatever you set when using the program is stored for subsequent uses.
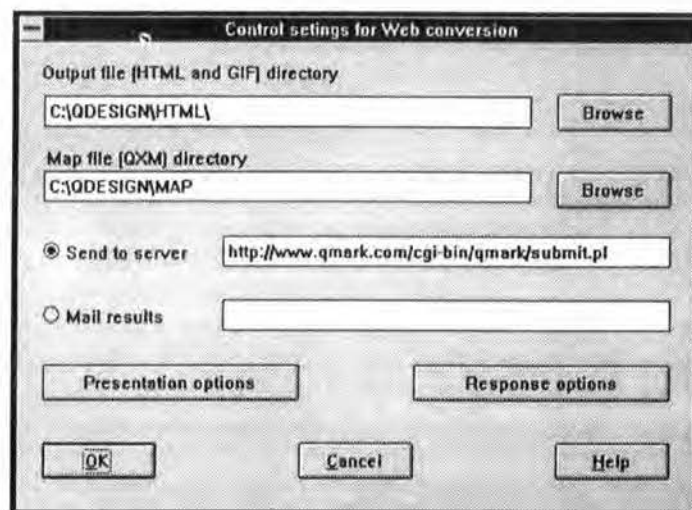
Output file (HTML and GIF) directory

This allows you to define the directory you want .HTM and .GIF files to be created in when files are converted. Type in the path, or use the **Browse** button to select it interactively.

Map file (QXM) directory

This allows you to define the directory you want .QXM map files to be created in when files are converted. Type in the path, or use the **Browse** button to select it interactively. This can be the same or different as the HTML directory.

Send to server

You must choose whether you want answers sent back by e-mail or sent to the On-line Scorer on a server. If sending to a server, you must define the address of the On-line Scorer.

- If you are using the On-line Scorer on your server, you should put the address of the Scorer script here (please see the notes that come with the Scorer for how to define this).

- If you are using the On-line Scorer on our server, you should put here the address advised by us, which is likely to be: http://www.qmark.com/cgi-bin/qmark/submit.pl

- If you do not have access to the On-line Scorer, you should select **Mail results**.

Mail results

If results are to be mailed to you, you select this option, and set your e-mail address in the usual Internet format as the address for answers to be returned to.

For example, if we were setting a test, we would enter qmark@cix.compulink.co.uk, but please put in your address not ours!

Presentation options

This button takes you to a subsidiary dialog that lets you control how the test is converted to HTML. See section 3.2.2 below for information on this.

Response options

If you select **Send to server**, this button is available to control how the On-line Scorer will process answers. See section 3.2.3 below for information on this.

3.2.2   Presentation options dialog

The options on this dialog control the way the HTML document containing the questions is constructed, and so how the test or survey is presented to the user.

Ask user name

If you set this, then the HTML document asking the questions includes a text entry box at the end of the test to ask the user's

name. If you do not set this, tests or surveys are anonymous.

Include graphics

This defines whether to convert graphics in the test file into .GIF files referenced by the HTML file. Unless you have a reason to exclude graphics, you should usually set this on.

Allow HTML in text

If you set this on, then you are allowed to include HTML language elements (eg links to other documents) inside text in questions. See section 3.3.1 below for more details on how to do this.

You are recommended to set this off as a new user or if you are not familiar with the HTML language. Then any HTML characters or language elements that are in the questions (by accident or design) are made into ordinary text rather then left as HTML commands for the browser to act on.

End of test wording

This is wording displayed at the end of the test (placed in the document just above the submit button described below).

Submit button

This is the wording for the on-screen submit button that the user presses when he/she has finished the test and wants to submit the answers. For example, you could put "Send", "Submit answers" or "Finish" here.

Reset button

If you choose, you can define a "reset" button, that the user can press to cancel all his/her answers, and restart answering. If you want such a button, define its wording here, eg as "reset" or "Press this button to clear your answers and restart".

Passwords

This option lets you set passwords for the test, but at the time

of writing this manual, these passwords are not used in the QM Web software. Contact Question Mark Computing, or look in the README.WEB file to see how you can use them.

3.2.3   Response options dialog

This dialog defines what information is stored on the server for you to access, and what feedback is given to the user after a test is taken. It is only used if you are sending answers to the server.

Save answers to QXA file

This defines whether you want to save the answers to tests and surveys. If you set this, you make a .QXA file on the server containing the complete answers and scores to all questions that you can later access and convert to a Question Mark answer file for analysis. If you don't set this, answers are not

stored.

Save results to QXR file

This defines whether you want to save a results file for tests and surveys. If you set this, you make a .QXR results file on the server containing the name of each user, his/her score, his/her e-mail address if known and the date and time the test was done.

Survey

You set this if the questions being converted are a survey. This means that the user's final score and right/wrong feedback on questions cannot be given, and a .QXS file containing a frequency analysis of answers to questions is stored on the server.

Show results summary

If you set this, then the user sees a link on the final page to a list of results for all people taking the test/survey. If this link is followed, the results are shown.

This is usually the .QXR file with a list of people taking the test and scores, but if **Survey** is set, it is the .QXS file with an analysis of answers so far.

Show final score

This is whether you want to tell the person taking the test his/her final score at the end of the test.

If the test includes any final page text, this is always given to the user, including text in differing score bands, whatever is set here.

Response message

This is the first message given to the user by the On-line Scorer. Even if no other response is given, this message is.

Show corrected questions

Setting this allows you to give back feedback on whether answers to individual questions are right/wrong.

You can set whether to do this for **None** (ie not do it), **Unanswered** (ie only unanswered), **Wrong** (ie unanswered and all not right) or **All** questions.

For each question that feedback is given, the user is told whether his/her answer is right or not. You can also choose to **Show question text** (the text of the question), **Show correct answers** (tell the user what the right answer is) and **Show feedback messages** (messages defined when setting up the question in Designer).

If you want full feedback set **All**, and set all the check-boxes on.

3.3 Advanced test creation options

3.3.2 Including HTML in .QDT file

If you set **Allow HTML in text**, then you can include HTML in any of the text that is converted into HTML - question wordings, choice wordings, feedback text and final page text.

The most useful thing to put in is likely to be links to other documents. For example you could put a link in a final page to another test or some diagnostic information. Or you could put a link in a question that people can access to get some information.

But whatever you put in the text will be placed in the HTML file, and can have any effect you choose, which makes for a lot

---

of interesting possibilities - for example, you can set layout, reference multimedia programs or call your own script programs.

You are responsible to make sure that whatever HTML you use is correct. Do not put characters that could be interpreted as HTML (eg the < character) elsewhere in your text.

3.3.2 Editing the HTML file after it is created

If you are familiar with the HTML language, you can edit the HTML file created by QM Web. You can use any HTML editor for this.

Be careful about what you edit - it is safe to add layout changes to the file, but you must not change any of the special codes in the file that are referred to in the .QXM file - in particular the input type, name and value fields that define the question structure.

3.3.3 Other settings in QMWEB.INI

There are four extra entries you can make in QMWEB.INI if you want to control the way the HTML file looks. Use Notepad or another suitable program to edit this file.

DOT=

This defines the graphic that is used for "bullets" in the HTML file, at the start of questions. If it is left blank (as is the default), no graphics are used. If set, it must refer to a valid graphic file in the same directory as the HTML file on the server. Note that most servers use the Unix operating system in which file names are case sensitive.

Some example bullet graphics are enclosed on the distribution

disk. For example if you set DOT=greendot.gif, this will use
file greendot.gif. If you use a graphics file, you must make sure
it is distributed with the HTML file.

CAPTION=

This defines the size of text used for the document and
question headings. This uses the standard HTML codes for
defining text size, where h1 is the largest and h6 is the
smallest. For example CAPTION=h2 sets this text size at h2.

TEXT=

This defines the size of text used for the question text. For
example, TEXT=h3 makes this size h3.

QUESTION=

This defines the size of text used for the choices in multiple
choice and multiple response questions. For example,
QUESTION=h4 makes this size h4.

4.   Delivering tests and surveys

4.1   Distributing material

4.1.1   Issues to consider before distributing a test

Before putting a test or survey on the Web, try it out using a
browser to read the HTML file locally. This is easy to do on
most browsers, with **File | Open File** or **File | Open Local
File**, or a similar command. This lets you check what you have
made before putting it on the Web.

Ideally you should get someone else (or a few people) to
answer your questions, and then follow through the whole
process of marking the answers and analysing the results, to
check that everything happens the way you expect.

Keep back-up copies of all files created. You may find it useful
to copy files to floppy disk before distributing a test or survey,
so as to be sure you have a copy.

- You will need the .QDT file (and any .QDL library files
  if used) if you need to change the questions later.

- You must have the .QXM map file to mark the answers -
  you need the exact file that was created at the same time
  as the HTML file. (You cannot mix HTML and map files
  created at different times, even if the question content is
  unchanged.)

4.1.2   How to distribute

To let people answer the questions, you distribute the HTML file and any accompanying GIF files. (You should not distribute the .QXM map file.)

If you're not sure which GIF files accompany the HTML file, you can check by examining the HTML file in an Ascii editor or word-processor. Or else use File Manager to delete all previous GIF files from the directory, before converting.

Putting files on your Web server

The usual way of distributing the test or survey is to put the files on a Web server, so that anyone can access them via the Internet.

To do this, you simply copy the files onto the server. The GIF files must be on the same directory as the HTML file. If the server is a UNIX one, you should make sure that the GIF file names are all in lower case (eg "graphic.gif"). You should give the HTML file a 4 letter extension ".html", rather than the 3 letter .htm extension on a PC.

(If you are using the On-line Scorer, you must also put the map file on the server. See the On-line Scorer user notes for how to do this.)

Using our server

If you are using our server, you need to send us the HTML, GIF and map files, or if you are just using our server to mark the answers, then you just send us the map file. Please send us these files by floppy disk in the mail, or if you want to send them by e-mail or Compuserve, please contact us first to discover how.

Distributing by e-mail

If the test or survey has no graphics, you can simply send the

HTML file (which is in Ascii format) as an e-mail message. Send an accompanying message telling the recipient to save the HTML message as a .HTM or .HTML file, and then open it with a browser.

If there are graphics files, you will have to send the files as binary file e-mail.

Distributing on floppy disk

Put the HTML and GIF files on a floppy disk, and tell the recipient to put the disk in a floppy drive, and open the HTML file with a browser. (Or else to copy onto hard disk, and then open the file.)

4.2   How people answer the questions

4.2.1   How the questions look to the user

People answering a test or survey open the HTML file with a Web browser. (They can use any Web browser that supports forms, including Netscape or Mosaic.)

The test or survey will appear to the user as a single document. Many browsers will display the text first, and then the graphics after a delay. How the questions look will vary with different browsers and on different kinds of computer, but the following general format will be followed.

- At the top of the document will be the name of the test or survey (as defined by you in Designer), followed by a horizontal line.

- Each question then appears in order, separated by a horizontal line. Questions are numbered from 1 upwards,

with explanation questions unnumbered. If you have defined a bullet GIF for each question (see section 3.3.3), this will appear before each question number.

- At the end of the document will be the **End of test wording** you have set, the submit button, and a reset button if you have defined one.

On most browsers, users will be able to scroll up and down the document at will, answering questions in any order they choose.

Users will usually take the test or survey while connected to the Internet; but it is also possible for them to download the test to their computer, disconnect, answer the questions, and then re-connect to submit their answers.

4.2.2 Response with answers marked by e-mail

If answers are returned by e-mail, then when the user presses the submit button, the browser will e-mail the answers back to the e-mail address specified when converting the test.

Usually the browser will inform the user that a mail message has been sent.

4.2.3 Response from On-line Scorer

If using the On-line Scorer, then when the user presses the submit button, the On-line Scorer will run. It will read the answers and look at the map file, and then prepare an HTML response document to show the user.

This file will contain at a minimum the **Response message** defined when converting, and will also include the final page text for the score band the user is in, if you have defined a final

page in Designer.

Other information (feedback on questions, the final score and links to results documents) will also be included if specified while converting.

4.3 Assessment security issues

Here are some issues to consider if you are using QM Web to deliver exams or assessments on the Web.

Please also check the README.WEB file for any up-to-date information.

Preventing access to the questions

The nature of the Web encourages a free flow of information. Once you have put your questions on a Web server, they become publicly available. Anyone with a browser anywhere in the world can download them by quoting the address and name of the HTML file.

A limited security method is to hide the name of the HTML file from people, but there are ways of searching for HTML files. In any case anyone who legitimately takes the test can capture the name of the test (or indeed the whole HTML file) and copy it to others.

It is possible to have some control on access using special security protocols and encryption, or by using a program to construct the HTML file on-line, but with standard QM Web, you must assume that your questions will not be secret.

Preventing access to the right answers

The HTML and GIF files (the only files distributed to students) do not contain any information on scoring or which answers are right. Thus a student cannot obtain right answer information from them.

The right answer information is only held in the .QXM map file. If you are marking answers by e-mail, this file never leaves your PC, and so is as safe as your PC is.

If you are marking answers using the On-line Scorer, then the map file is stored on the server, and is as safe as other files on the server. On a well set-up server, this should be completely safe, but you are dependent on the security of the server. You also should make sure that the process of loading the map file onto the server is secure and cannot be intercepted.

If you are giving feedback on the test, and this includes the right answers, then people can find out the right answers by taking the test once, seeing what is right, and then taking it a second time. Or theoretically, someone could look at the Internet traffic to one person taking a test, and see their feedback by intercepting the traffic (though this is quite difficult and unlikely).

Checking identity of people taking a test

At the time of printing this manual, there is no automatic way of checking people's identity on the Internet. You can ask someone to enter their name, but they can lie.

One way round this is to invigilate test taking, get a trusted person to be present when the test is taken. Alternatively you can define questions that ask users to enter additional information about themselves to validate their identity.

If secure identification is important, one method to consider is to use a one-time password for each person and test, as follows.

1. Allocate each test-taker his/her own unique identifier for each test. This is a one-time password that identifies him/her for that test.

2. Ideally communicate this password not using the Internet, eg by telephone or post. (If you send the password by e-mail, then it could theoretically be intercepted.)

3. Get the test-taker to quote this password either as the user name for the test, or in a special question in the test.

4. When you review the results, check that the passwords and people match up, and that no-one has used a duplicate password. If duplicates are found, then generally the earliest use should count.

If someone does a test twice, they will have to re-use their password or use another identifier (both of which you can spot). And if someone else intercepts the Internet traffic and gets the password, it will not have any value as it is only for one-time use.

5.   Analysing the results

5.1   Dealing with results returned by e-mail

When someone does a test, you will get an e-mail message containing their answers. To process this, do the following.

1. Using your standard mail reader, copy the contents of the message to the Windows clipboard. (If your standard mail reader is not in Windows, you will need to copy the mail file to Windows, and copy the contents to the clipboard in another program.)

2. Run the WEBANS.EXE program included with Basic QM Web. You need the original .QXM map file created when the HTML test was made.

    Use **Preferences | Set Map file directory** to show the directory for map files and use **Preferences | Set Answer file directory** to define the directory you want answer files to go to. (These preferences will be stored in QMWEB.INI.)

3. Use **Edit | Paste**, and the software will grab the results from the clipboard, mark them, and create a Question Mark Designer for Windows .QDA answer file with the answers and scores in it.

4. You can then use the standard Reporter software to analyse the answers. See section 5.3 below for some information on this.

5.2   Dealing with results returned from the On-line Scorer

QM Web can make several different result files, as follows. (The first three are stored on the server; the last one is created on your PC by WEBANS.EXE.)

.QXA   This is a complete recording of someone taking a test. You need this to be able to make a Question Mark answer file from Web answers.

.QXR   This is a results summary file that can be stored and displayed on the server.

.QXS   This is a survey summary file that can be stored and displayed on the server.

.QDA   This is the Question Mark Designer for Windows answer file format, made by Presenter when someone does a test under Windows, or created by WEBANS.EXE from e-mail answers or from .QXA files.

If a QXR or QXS file is stored on the server you can access these with scripts included with the On-line Scorer. These can also be made available to test-takers if you set **Show results summary**.

To deal with the QXA file:

1. Download it, using one of the scripts included with the On-line Scorer, or copy it off the server.

2. Run the WEBANS.EXE program included with Basic QM Web. You need the original .QXM map file created

when the HTML test was made.

Use **Preferences | Set Map file directory** to show
the directory for map files and use **Preferences | Set
Answer file directory** to define the directory you want
answer files to go to. (These preferences will be stored in
QMWEB.INI.)

3.   Use **File | Convert .QXA file**. This will make a
      Question Mark Designer for Windows .QDA answer file
      for each person answering a Web test.

4.   You can then use the standard Reporter software to
      analyse the answers. See section 5.3 below for some
      information on this.

If an Owner's password is set in the test (ie set in the converter
when you make the test), you may need to quote it to get the
above.

5.3   Using Reporter to analyse answer files

5.3.1   What the answer file contains

A separate answer file is made for each person answering each
test or survey. It contains the answer and score for each
question answered and also some general information, including
the test and user name, and the date and time the test was
taken.

The user name is the name entered by the user, truncated to 16
characters, or a generated name if none is asked.

The date and time stored in the file is when the results are

converted with WEBANS.EXE for results returned by e-mail
(not when the tests were taken). The time taken to do the test is
not recorded in QM Web.

You can analyse answer files from tests taken on the Web
together with tests delivered under Windows with Presenter.
However explanation questions are allocated a question number
in Presenter but not in conversion to the Web, so question
numbering can be different. Also the Questions Analysis report
will not recognise questions delivered in Presenter and on the
Web as being the same.

5.3.2   Using Reporter

When running Reporter, you see information on each answer
file, including the user name, name of the test and score.

Make sure the directory in Reporter is the same one
WEBANS.EXE saves answer files to (ie that set by
Preferences | Set Answer file directory). You can use
File | Directory to set the directory in Reporter.

Double-clicking on a user's answers gives you a Full report on
the answers, including the answer and score for each question
answered. Selecting **Report | Full** also gives you this
information. Other reports give a summary of results for a test,
a list of people answering a test with scores, and an analysis of
answers for each question.

If you want to analyse the results in an external program, you
can export them to database (.DBF) format using **Report |
Export**. You can then read this file using a database,
spreadsheet or statistics program.

For full information on Reporter, see the Question Mark
Designer for Windows user manual.