Test Generator
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Introduction

TG Version and this Tutorial

TG2.4.20
The most recent version of Test Generator is TG2.4.20. There have been several releases under this version. A *release* is a newer copy of TG. Releases are introduced for a variety of reasons: new features, or enhancements, bug fixes, as well as modifications to either TG, Tester or TG Options such as SecureTG.

Web Tester
Any TG Web customer who would like to update to the latest release will also have to update their web Tester. These updates are free to customers who have an active support subscription. Please contact us for more details.

Screens
Most of the screen shots in this tutorial are found in earlier versions of TG; however, the ability to view, copy and assign URL media links from the Media window, can only be experienced by updating to the latest TG2.4.20 release. Please contact us to request an upgrade or update.

Introduction

About This Tutorial

This tutorial is intended for customers who:
• Would like to review this topic in more detail, or
• May not have yet had an opportunity to participate in an online training sessions or
• Would like to "brush up" on the topic or
• Purchased an earlier version of TG that did not include some of the new media options

It's also intended for those of you who are considering the purchase of Test Generator.
If you haven't yet scheduled an online demo, we encourage you to do so. You can schedule an online demo or contact us.

Background / Assumptions

In order to perform the steps outlined in this tutorial...
• You have successfully downloaded the TG installation file from our web page.

You have successfully installed TG on your computer.
• You can login to TG and view the home page.

Introduction

Test Creation and Media

Test Generator enables test authors to use various types of media during the creation of questions. Questions can be created within a TG question bank manually, or by importing them using any of the file types supported in TG: .csv, .txt, .xls, .rtf, .xml.

When we refer to "media" we mean everything from static images, documents, audio and video. Here are some of the media types TG supports:

- Graphics: gif, jpg, png, bmp
- Audio: .wav, .mid, .mp3
- Text: .txt
- Adobe Acrobat: .pdf
- Video: .mp4

Note: file formats continue to change. New ones are added and older versions, like Flash, are no longer supported. We will continue to test and update TG-supported media files and methods. If you have questions, please contact us.

Assumptions

- You are familiar with some/all of the media formats described above
- You have access to one or more media software tools
- You know how to create and edit your media assets or have access to a resource person who is familiar with the file types and methods described in this tutorial.

Introduction

Methods for Assigning Media to a Question

Option 1

Pre-TG2.4.15, we had indicated that it was possible (in TG LAN_sql and TG Web) to cut-and-paste static/still images into the question and answer fields. This approach creates a "blob" in the database every time the media is pasted into a question or answer field.

Example: If a test author were to cut-and-paste a GIF image into each of four answer fields, the net effect would be to add four "blobs" to the TG-sql database. If this practice were repeated across multiple tests, it could produce a very large database and could lead to latency and performance issues. We *strongly* recommend against using this option.

Option 2

Using a version of TG2.4.#, the test author can import media assets into TG's Media bank and then assign the media to a question. Using this approach, one piece of media can be associated with multiple questions within the same test.

A media asset can also be assigned to different questions--in different tests. Importing and organizing your media in the Media Bank also saves hard-drive space and keeps your database administrator happy.

Introduction

Methods for Assigning Media to a Question

Option 3

Beginning with TG2.4.15, test authors were able to embed a static image in the question or answer field by defining its path in TG's Media bank. This option works in TG Web, with its web *Tester,* but not does not apply to TG Desktop or TG LAN, both of which use the windows Tester.

Format: **tg://media/<media bank directory name>/<filename.***>**
Example: tg://media/equations/formula1.gif.

Option 4

Beginning with TG2.4.16: Creating an iframe in a question or answer field
Test authors can place links to external data/media sources in the question and/or answer fields. This will place an iframe within the web Tester.

Format: **"ext://<n pixels wide>x<n pixels high>@http://<address>"**
Example: **ext://800x600@https://en.wikipedia.org/wiki/Main_Page**

Introduction

Methods for Assigning Media to a Question

Option 4

Beginning with TG2.4.20, we have introduced URL tags. As a result of this enhancement, the URL is now accessible when viewing the media file within the Media Bank, or when selecting media during test editing. If you are just getting started, we invite you to contact us for a free consultation.
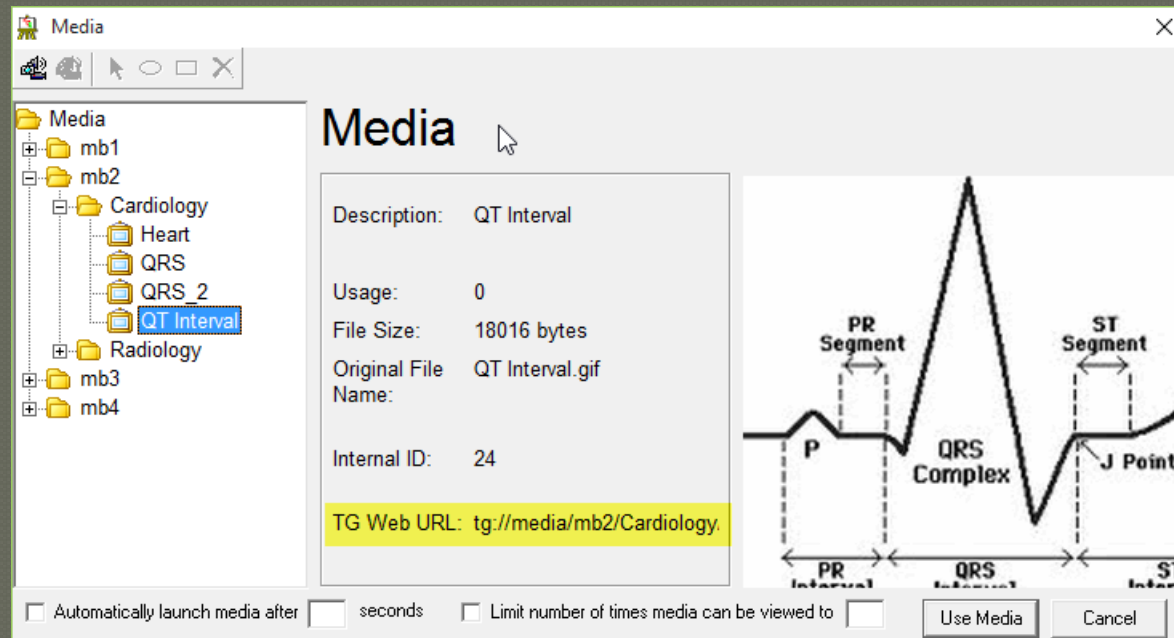
Introduction

TG Products and Media Storage

Where your media is stored will vary based on the TG product you purchased.

- **TG Web** media can be stored in TG Web's sql database, on your intranet or over the Internet.

- **TG LAN_sql** stores media in the sql database.

- **TG LAN_msa** stores media in a directory on the server.

- **TG Desktop** stores media in a directory on the desktop pc where TG was installed.

Best Practice

If you have, or are considering using, large video files we recommend storing these assets on a server/servers that are configured to process and stream these files. Importing very large video files into the sql database is not recommended.

Best Practices

Media Use in TG Desktop and TG LAN

If you use media in TG Desktop/LAN, we recommend importing your media into TG's Media bank (a.k.a., folders, directories). Start by creating one or more banks. Media banks can be organized by media type, user, subject or any classification system you wish to use.
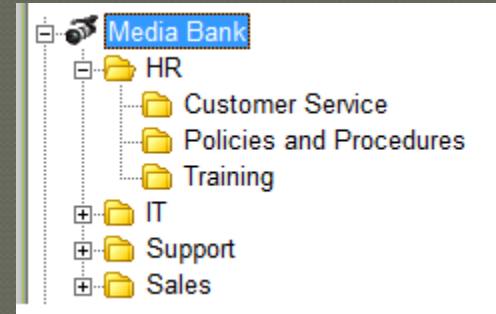
Once your TG media banks are created, locate and organize the media on your computer so as to simplify locating the media content that you'd like to import into TG's Media bank.

One ready-made option are the various media directories (e.g. My Pictures, My Video) located under your computer's My Documents directory.

If you have your media organized in other directories, or you choose to deal with your media organization differently, fine. There are several third-party media organization software tools available.

Best Practices

Media Use in TG Web

If you are using TG LAN with a Sql database, you can import your media assets under TG's Media banks and then assign media to individual questions as required.

Naming Conventions
We recommend keeping media folder and file names short.
Name your media files prior to importing them into the media banks.
File names do not have to be unique, but it's helpful if you have multiple test admins.

A word of caution: once a file is named, imported into the Media Bank and associated with a test item, we recommend that you not change it. If you rename a media file, any previous (media) test question references will fail because TG is looking for a file name that no longer exists.

URLs
Addresses for any media file that is imported into TG's Media Banks use this format:
tg://media/<media bank directory name>/<filename.*
Example: tg://media/equations/formula_1.gif.

Best Practices

Media Use in TG Web

Using iframes
Embedding media sources using an iframe, use this format:
ext://<n pixels wide>x<n pixels high>@http://<address>
Example: ext://640x480@http://www.loc.gov, will place an iframe 640 pixels wide x 480 pixels high.
The width and height can be modified by the test author to accommodate other dimensions

Editing Media
We recommend editing your media prior to importing it into TG's Media Bank module.
TG does not contain any media editing tools.

Media Dimensions and File Sizes
Consider your testing audience when planning your media use.
Screen size and resolution can either enhance or inhibit the display of your media. What looks good on a newer desktop or laptop monitor may be difficult to manage when viewed on an older computer monitor. See guidelines later in this tutorial.

Media Banks

Media Banks

About TG's Media Bank

The Media Bank is a module located on TG's home page. It's a repository for everything from ".jpg" to ".txt" files. These files can be imported and stored in folders organized under the Media Bank module.

You can organize your media in one or multiple media folders by file type, subject or whatever category suits your requirements. In the following examples we are using generic labels, "mb1, 2 and so on" for the root media banks.

Imported media can be used with *any* of TG's question types, enabling you to use the same media file with different questions in the *same* test, or with various tests located in the same, or different, courses.
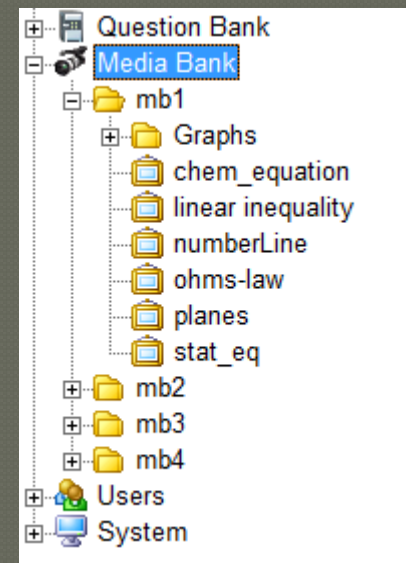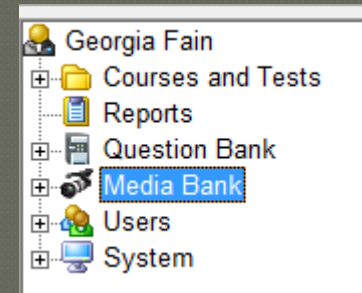
Media Banks

How to Create a Media Bank

Open TG, **Start > Programs > Test Generator**. Click on the "G" icon.

1. Select the Media module.
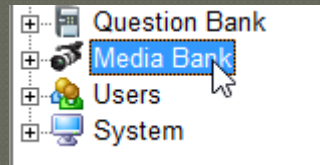
2. R-click and select New Media Folder
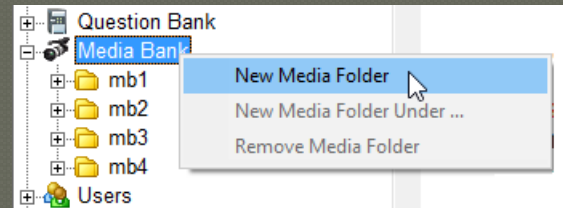
3. Name the media folder. Note: We suggest giving the media folder a name that will make it easy for you/your test authoring team to identify the subject matter.
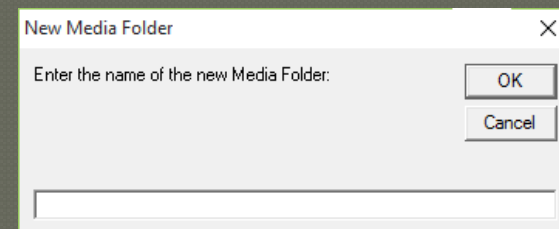
Media Banks

How to Create Sub-folders

TG gives you the ability to create sub-directories under the parent bank.

Highlight the media folder where you want to create a sub-folder. Right-click on the folder, in our example the "mb2" folder. A pop-up menu will appear, select the *New Media Folder Under mb2* menu option which will then open a *New Media Folder* window.
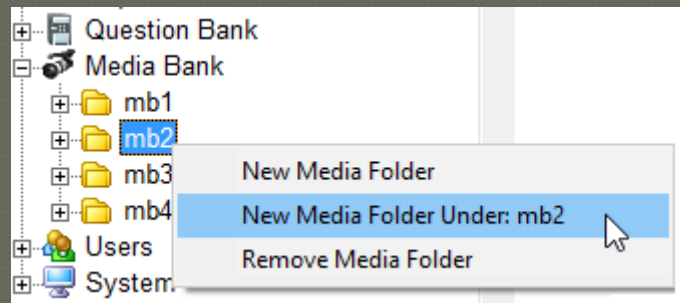
Keeping in mind the *Naming Conventions* that we described earlier in this tutorial, enter the name of the sub-folder and click OK.
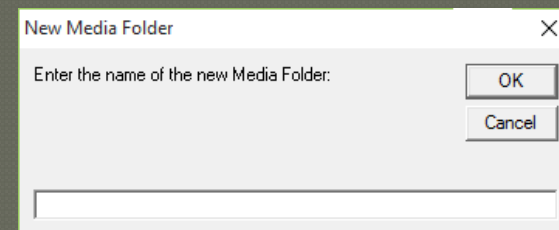
Media Banks

How to Create Sub-folders

This process will create a new sub-folder under your root media bank.

In our example, we've created a "Cardiology" sub-folder under the root bank, "mb2".

Repeat this process as many times as you wish.
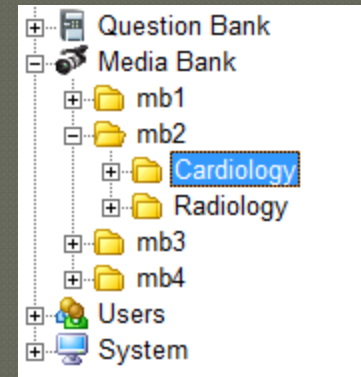
You can also create nested sub-folders to organize your data at various levels under the parent sub-bank.
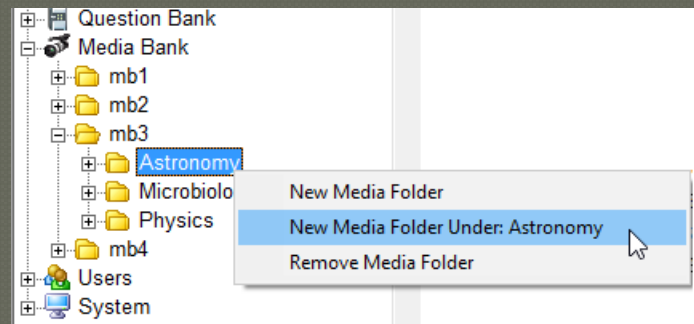
Media Banks

How to Import Media

Once you've created one or more media banks, you can begin importing your files.

1- From TG's home page, select the media folder into which you would like to import your files, "Cardiology" in our example.

2- From TG's text menu, select File > Import > Media.

3- This will open an Import Media window. Navigate to wherever your media are stored by selecting the appropriate directory in the Look in: window.
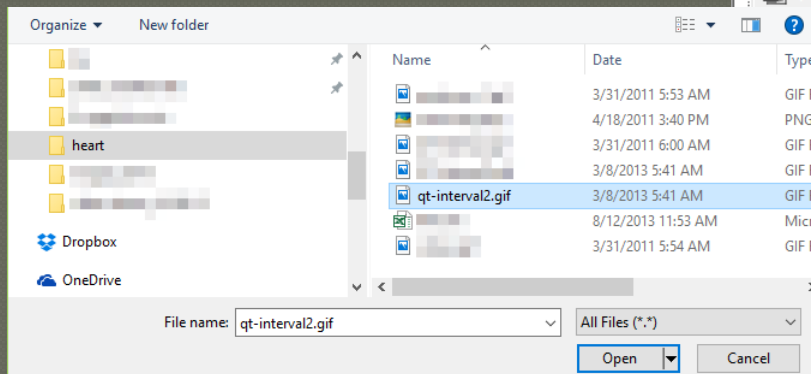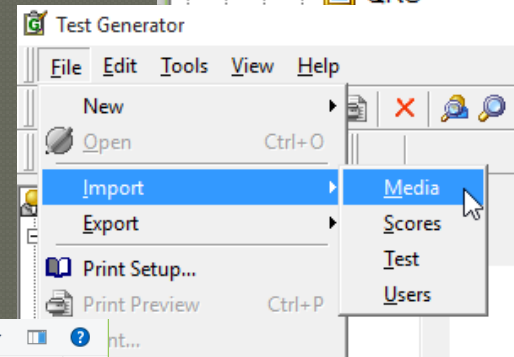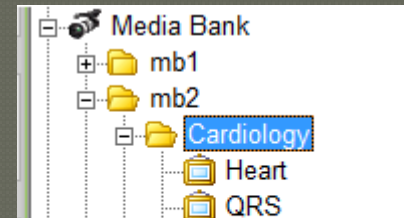
In this example, we've organized our files under a directory we named *media*. We recommend doing something similar in order to simplify locating and importing your files into the media banks you've created.

Media Banks

How to Import Media

4- Select the media folder containing the media you would like to import.
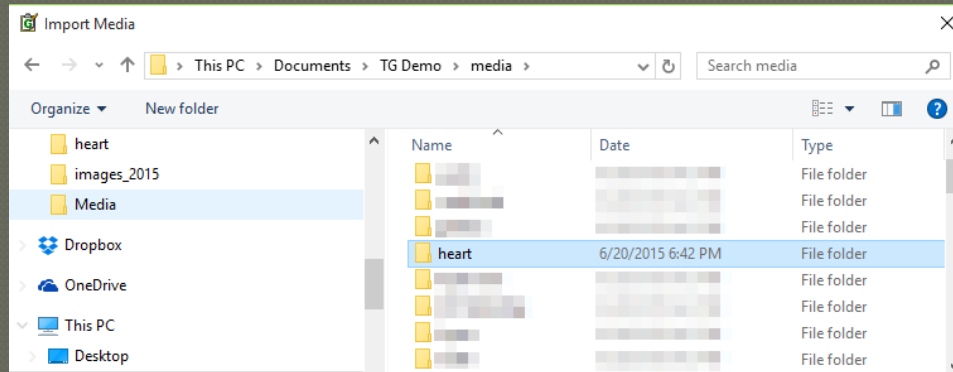
5- Select the media file you wish to import into the folder you selected in step 1. You can select more than one media file to import by Ctrl + clicking on additional files.
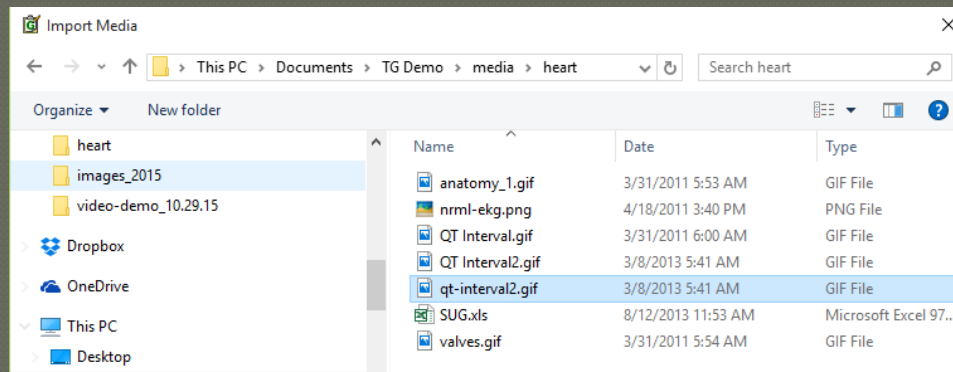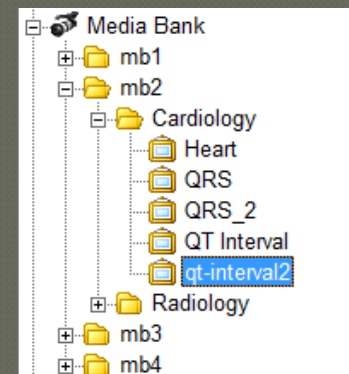
Media Banks

How to Import Media

Next, click the *Open* button in the lower r-hand corner of the Import Media window.
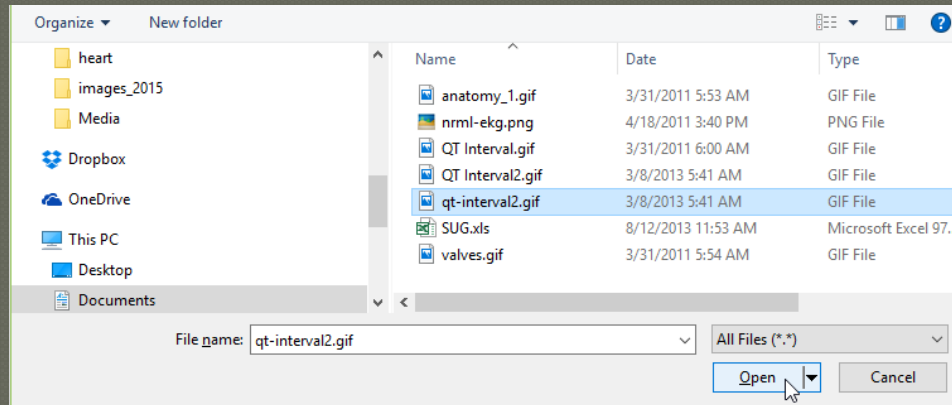
6- This will import your media file and place it in the media folder you selected in step 1. You can continue this process and add other media files to other media folders, or perform this process as needed.

Media Banks

Editing Your Media Files

TG does not include a media editor for the creation, editing or processing of media files.

There are numerous media editing tools available in the marketplace, including Window's Paint, which is included with Windows. There are also more sophisticated media tools available for purchase.

If you need to edit/modify your media for use in a test, we recommend doing so before you import your media into TG. If you discover that you need to edit the file you imported into TG, you can always delete the imported file (select the media in the media bank and click the delete button). This process will not delete your *original* file.

Locate your original file and, using your media editing software, edit the original -- or make a copy and edit the copy – and then re-import it into the appropriate media bank following the steps outlined earlier.
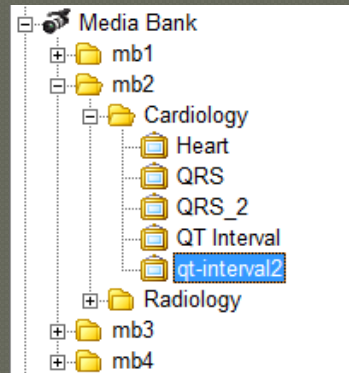
Media Banks

How to View Your Media Files

From TG's tree view, folders containing media have a "+" sign

Click the "+" sign to expand the folder and display its media contents.
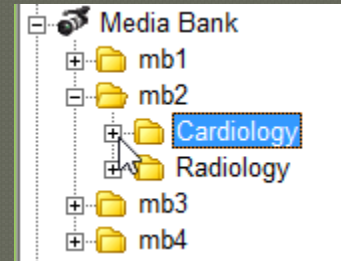
Selecting a file will display the media on the right side of the screen. If your media file dimensions are large, you may only see a portion of the image – even though the entire image was imported into TG.

Note: If you open your test in TG and assign the media to a question, you will be able to view the entire image, as will your test taker once you complete and publish your test.

Best Practices

- If you have, or plan on having, multiple administrative-level users preparing tests that include media, we recommend establishing a TG media-use policy. This may help prevent the indiscriminate use of duplicate and/or extremely large media files, which may hamper a test's performance.

- Currently, there are no file-size restrictions for imported media. Note: Large, uncompressed media files take longer to load and take up more space.

- The display and behavior of media varies based on many factors, including network bandwidth and the processing speed and memory of your computers. Wherever possible, use compressed media files (e.g., JPG, GIF) instead of media formats (e.g., TIFF, BMP) that require more computer resources.

- Whether you assign media to your questions at the question-banking stage, or "on-the-fly" when you are creating a test, we strongly recommend that you take the time to review the test—as a test taker—before publishing the test to your test-taking audience.

Best Practices

- If you are not familiar with the various techniques associated with media processing and optimization, we recommend you spend time exploring some of the many online and print resources that address this topic. If you require 24- or 32-bit, high-resolution images, we assume you are factoring in server and network performance as well as processor speed and memory requirements. We recommend experimenting with various image types to determine what will work best for you.

- If you…
  . Are new to TG or
  . Have not yet participated in an online training session or
  . Have questions about Media Banks or other TG features and best practices…

  We invite you to contact us for a free consultation session.
  Please contact us.

Media Bank

Method 1: Assigning Media to Questions

This method enables test authors to assign media to a question by clicking the Edit Media button and then choosing a media asset from TG's Media Bank.

From the tree view on TG's home screen, select and open your test. Double-click on the test icon to open it, or select File > Open Test.
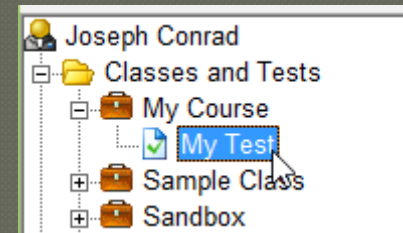
From the test's summary screen, select the question you want to add media to, and dbl-click on the row…
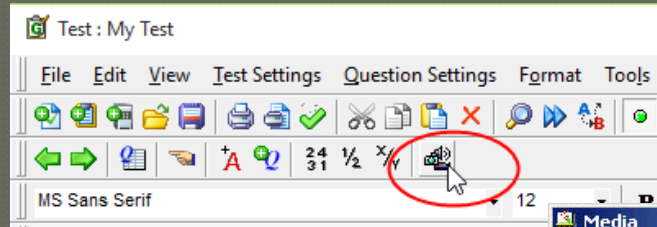
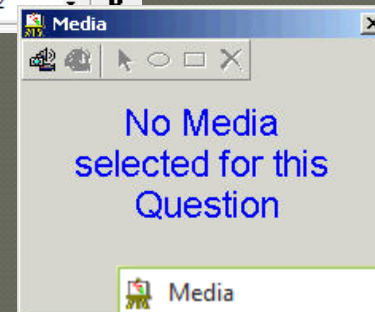… to display the question in edit mode.

Media Bank

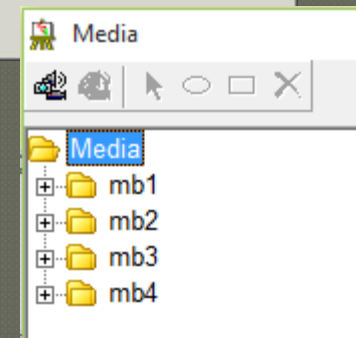## Method 1: Assigning Media to Questions

From the icon toolbar, click the Edit Media icon.

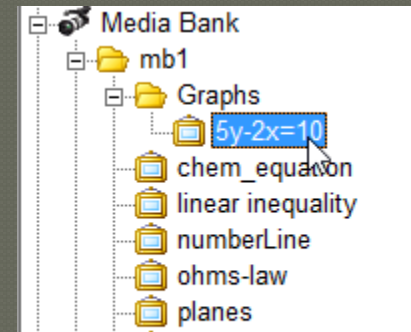Prior to December 2015, this action would display the Media window: "No Media selected for this Question."

In the latest release of version TG2.4.20, clicking the Edit Media button will display the Media bank window and media folders.

Media Bank

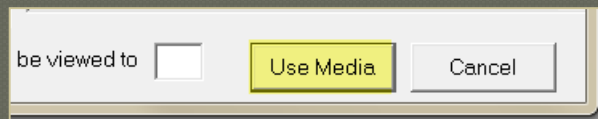## Method 1: Assigning Media to Questions

Click on/open the media bank containing the image you want to use.

The entire Media window displays the media bank tree on the left, media description in the middle and the image on the right.

In the bottom right-hand of the screen, select the Use Media button.

Media Bank

Method 1: Assigning Media to Questions

Here's another example of media in a Media window. This is what the test taker will see when they click on the Media icon during a test session. The size of the display will vary based on the size and dimensions of the media used.

During the test editing process, you can open/close the media window by clicking the Edit Media icon.
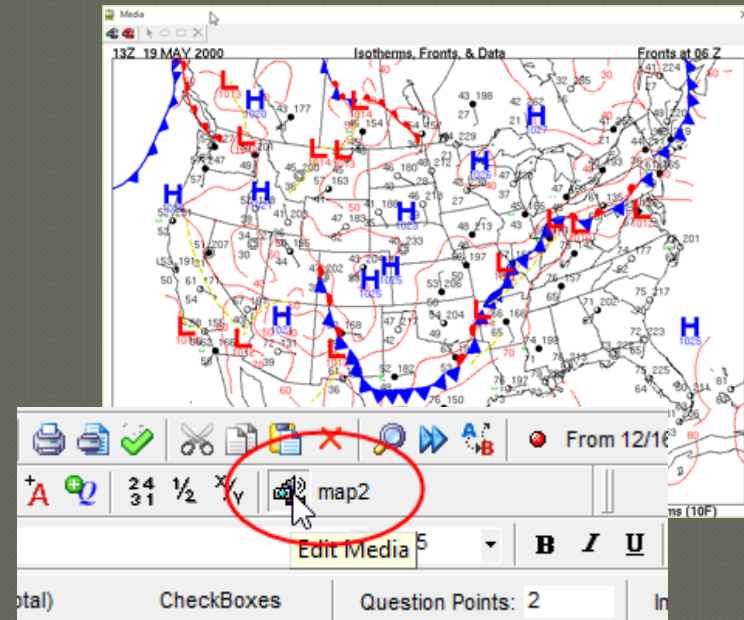
In our map2 example, the media is now associated with the question we selected. Note: this method *does not* embed the image in the question or answer fields. The media chosen for this question can be re-used with other questions in the *same* test or other questions in other tests, scattered across one or multiple classes.

As a best practice, we recommend making this type of media assignment during the creation and editing of items at the question banking stage.

Media Bank

Method 2: Media Bank URLs

Beginning with TG2.4.20, we introduced adding media from TG's Media Banks using a URL. The URL is accessible under TG's tree view by selecting the file that you wish to use (1). Once selected, details regarding the media file are displayed on the right side of the screen. Note the *TG Web URL (2).*
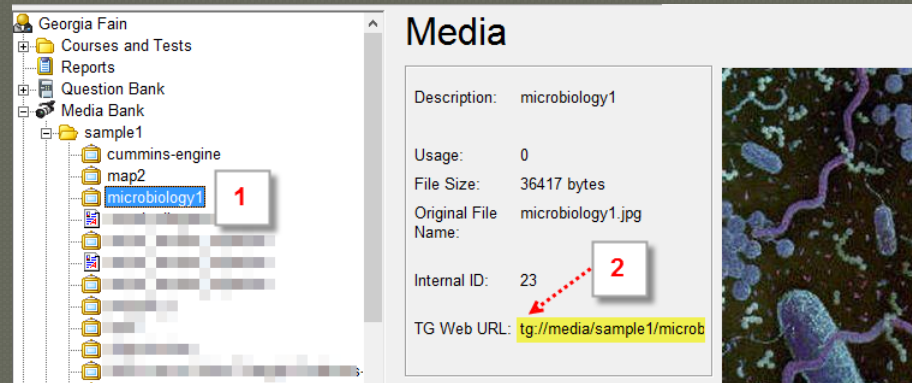
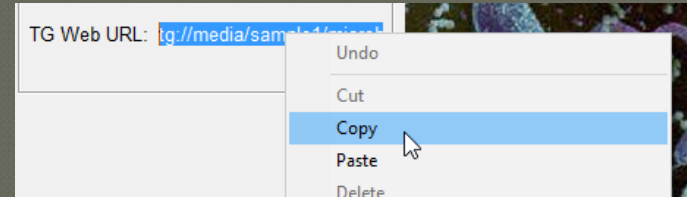You can then select the text in the URL field and copy the URL path using the Ctrl + C keyboard shortcut or by r-clicking the highlighted URL and clicking the Copy pop-up menu option.

Best Practice. If you plan on using various media files in your test, we suggest creating a text file listing the media file's description, file type and URL. If you're just getting started with the creation and organization of your Media Banks, we'd be happy to review the various options with you.

Media Bank

Method 3: Embedding URL Links in Questions

This method is designed those of you who prefer to make your media choices "on the fly", during test creation and is based on the following assumptions:

a- You have created a new test, and
b- Imported questions into your test—manually or using TG's *Test Wizard*,
c- The imported questions do not contain media and,
d- You have edited the questions in the question bank prior to importing them into your test
e- You have saved your test and are now viewing the test's summary screen:

Media Bank

Method 3: Embedding URL Links in Questions

Next, double-click on the row containing the question you want to edit. In the example below we have chosen a Short Answer question type, but we have not assigned a correct answer so that we can demonstrate how you can use media with this question type.

Next, click the Edit Media button to display the Media window.

Edit Media
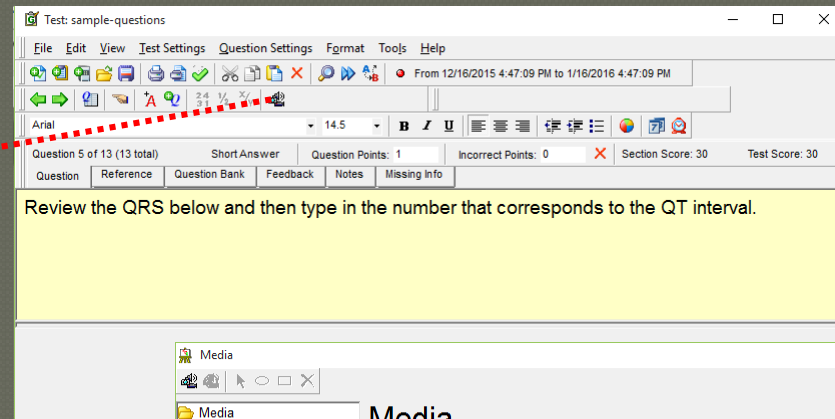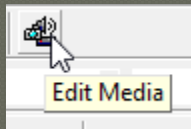
The Media window includes a tree view on the left, and media assets organized into folders.

In the example on the right, we've imported the media file, "QT Interval2" (1) into the *Cardiology* media folder. On the right, under the Media box, note the TG Web URL address.
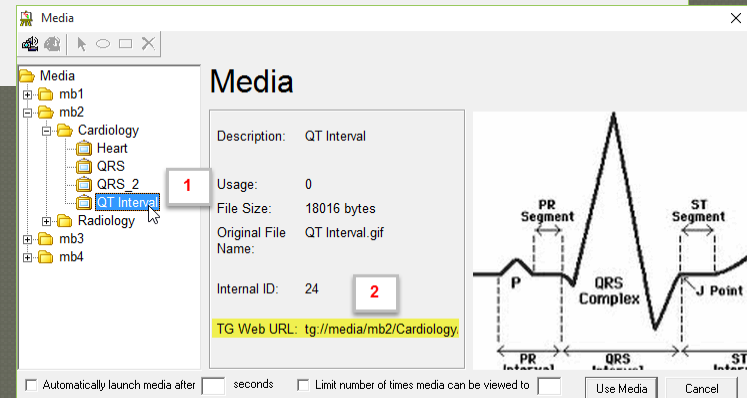
Media Bank

Method 3: Embedding URL Links in Questions

You can then select the text in the URL field and copy the address using the Ctrl + C keyboard shortcut, or by r-clicking the highlighted URL and clicking the Copy pop-up menu option.

TG Web URL: tg://media/mb2/Cardiology

… or by r-clicking the highlighted URL and clicking the Copy pop-up menu option.

TG Web URL: tg://media/mb2/Cardiolo

Undo
Cut
Copy
Paste

seconds   ☐ Limit number of times media
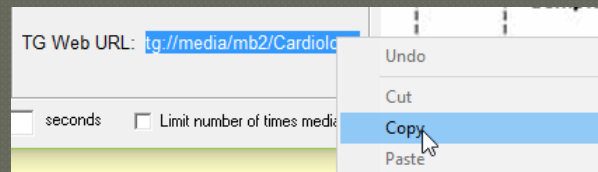
Next, close the Media window and paste the URL in the question text field. In our example, we pasted the URL "tg://media/QRS/qt-interval2.gif" below the question stem and then clicked the Save icon.

Review the QRS below and then type in the number that correspo

tg://media/mb2/Cardiology/QT+Interval.gif

Next, locate the red "A" in the icon toolbar to add an answer field to our question…

File   Edit   View   Test Settings   Question

⁺A
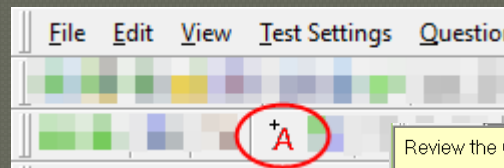
… and then type in the correct answer—which, in our example, is "4". As a best practice we recommend clicking the Save button at various intervals during editing.

Review the QRS below and then type in the number that cor

tg://media/mb2/Cardiology/QT+Interval.gif

4

Media Bank

Method 3: Embedding URL Links in Questions

To review the question your testing audience will see it in the web Tester, click the Tools menu > select *Preview Question in TG Web.* This will display a pop-up listing three options. You can choose any of these three options which will then launch the web browser...
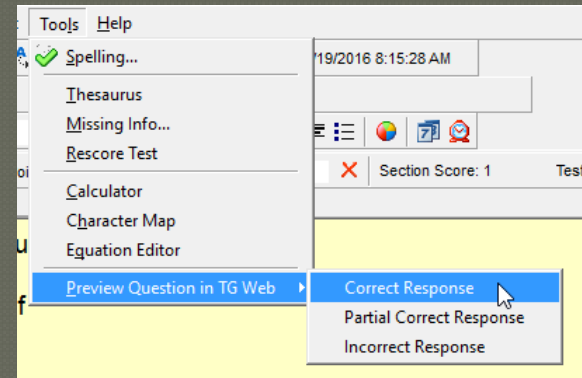
If the steps above were performed properly, you should be able to view the question and image (2) whose URL we added in the question field. Below the image is the answer field (3) where the test taker would type their answer,

Please note, that the feedback portion of the window (1) would not be present during an actual test *unless* you had selected that test property.
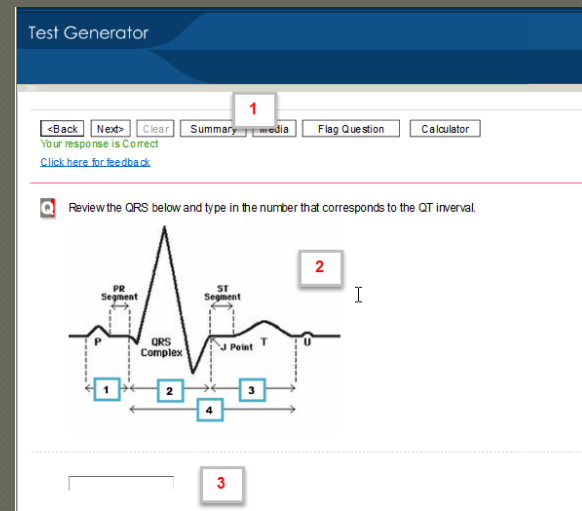
Media Bank

How to Control the Media Display and Frequency

Test authors can modify the display behavior of the media during the test.
These controls are located at the bottom of the Media window.

Automatically launch media after X seconds.
If selected, this option will display the media window without requiring the test taker to click the Media button during the test.

Limit the number of times media can be viewed to X times
If selected, this option will allow the test author to control the number of times the media, associated with a particular question, can be displayed.

If these control options are not used, then the default media display (during a test-taking session) requires the test taker to select the Media button in order to display the media.
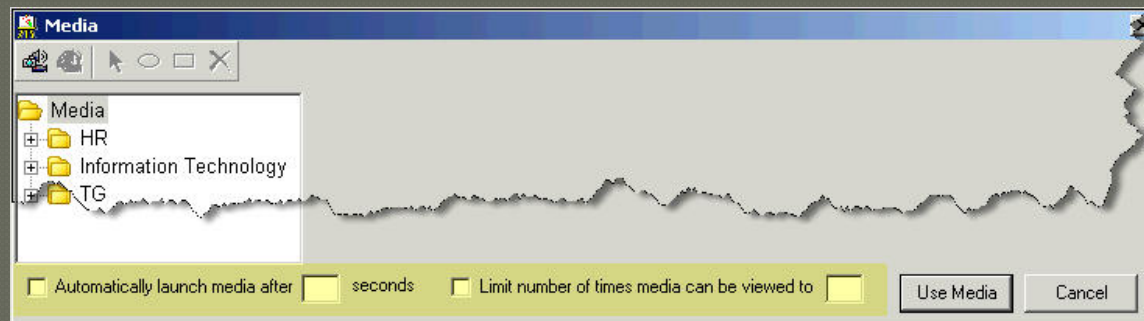
Media Bank

How to Access/Link to Other Media Resources

You can also refer/link to other media sources by placing a URL (web address) in the question field and/or answer fields. This is helpful if you have already organized various media resources on the web.

For example you might instruct the test taker to click on a web address displayed in the question field (ex. http://www.testshop.com). The link might include anything from a single image to several pages of content. This is yet another option for accessing and displaying information during a test-taking session.

When your test takers view the question in either the windows or web Tester, they can click on the link in order to display the appropriate information in a separate TG Browser window.

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How to Display Media Using the Feedback Option

TG enables test authors to provide feedback during, or at the conclusion of, a test. One of the options includes the use of media as feedback. Also, see TG Help > Index > Feedback > Options.

1- From the tree view on TG's home screen, select and open your test.
Double-click on the test icon to open it, or select File > Open Test.

2- From the test's summary screen, select the question you want to add feedback to, and dbl-click on the row to display the question in edit mode.

3- Select the Feedback tab and then click on the fb link in the row immediately above and to the left of the feedback tab.
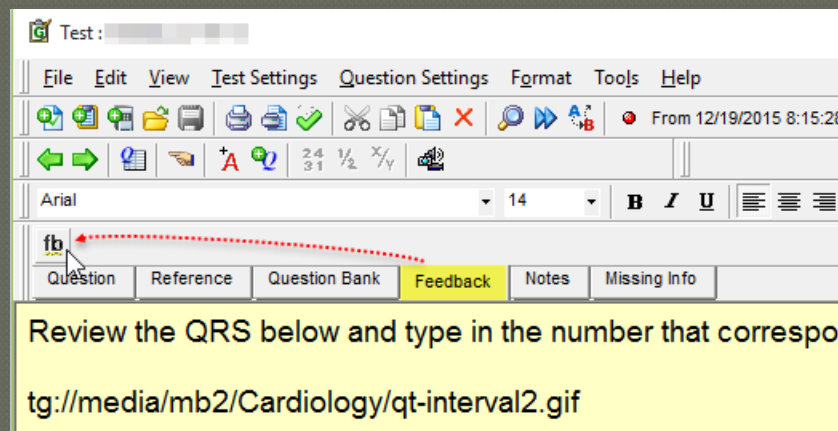
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How to Display Media Using the Feedback Option

4- This will display the Question Feedback window including a list of the available text, media and URL options and, by default, a text window.

Selecting either the media or URL options displays different content.

In our example, we've selected the Show Media Chosen Below option.
The display is similar to the edit media options described earlier in this tutorial. If you click the OK button, the selected media will be displayed as feedback to the test taker either during, or at the completion of, the test – depending the test parameters you define.
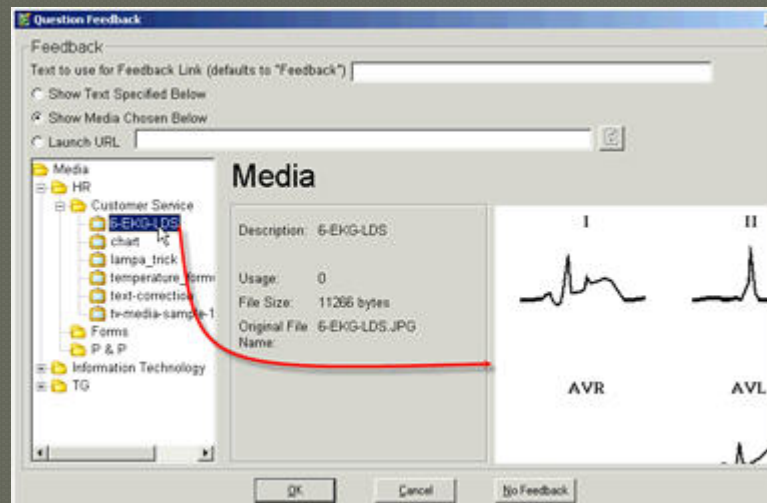
Media Banks

Conclusion

We hope that this tutorial has proven helpful and provided you with a good foundation regarding the various methods for implementing media with your Test Generator tests.

If you have questions regarding this tutorial, or if you have special media requirements, please contact us. We also offer customization services and we'd be happy to see if we can accommodate your requirements.

We are committed to the continuous improvement or our Test Generator products and we welcome your comments and suggestions

Thank You.

Glossary

Glossary

Definitions

Test taker (t.taker). The test-taking audience: a.k.a., *employees, trainees, students or customers.* T.takers designations can be changed under TG's home page: System > Settings > Designations tab.

Test administrator (t.admin). The test administrator or test author—the person responsible for creating or managing courses and tests. This may include individuals in HR/Training as well as IT personnel.

Tester. Refers to the software used to deliver a test. In TG Desktop and TG LAN, this is a Windows-based client that is installed on machines used by your test-taking audience. In TG Web, it refers to the web Tester which is accessed through a web browser. T.takers can log in to take a test using either a Mac or Windows computer. TG's web Tester supports Chrome, Firefox and IE on a Windows machine and Safari on a Mac.

Computer. TG's admin client is a Windows application and t.admins must use a computer that has the Windows operating system installed on it. The TG admin client can *also* be installed on a Macintosh computer using either *Parallels or Boot Camp* and the Windows OS installed. For more information, open a web browser and search "using windows on a mac".

Glossary

Definitions

Course or Class. These terms are used interchangeably and refer to the TG folder/directory under which tests are saved. A course that contains active tests and enrolled/eligible t.takers, is also referred to as a *production* course.

System. In TG, a module located under TG's tree view. It contains various system parameters useful in managing the TG testing system.

Server. A centralized computer that manages access to information and resources on a network. In TG LAN the testing database is stored on a server. In TG Web, the web Tester and TG database are installed on a server.

Test Properties. In TG, a menu option accessible to t.admins during test creation/editing. This module contains various test parameters that can be applied to a test.

TG Admin Client. The Test Generator application used by t.admins.

TG

Glossary

Definitions

Tree View. TG's Home page includes a column on the left side of the screen beginning with a user icon and name of the t.admin who has logged in to TG. This column also contains the modules that t.admins use to create and organize test items in question banks, create courses and tests saved under one or multiple courses, manage t.takers, generate reports and analyze test data through TG Reports.

URL. "… is the abbreviation of Uniform Resource Locator. URL is the global address of documents and other resources on the World Wide Web." –www.webopedia.com

As it applies to media in TG Web, the URL describes the address of media either *within* TG's Media Bank, or media accessible within an organization's *Intra*net or over the Internet.