

FEATURES

GarageGames' stock Torque Game Engine (TGE) World Editor itself is rich in features. However, combined with the Torque Collaborative World Design Tool (TCWDT), level editing using TGE's World Editor will be further enhanced.

Below are some of the main editing and technical features of Torque Collaborative World Design Tool.

Definitions

- **Hosts** are defined here as the user who hosts the level. They have comprehensive control over the level and aside from being able to create environmental effects, they also have control over who can save the level. This feature will avoid clients accidentally or unknowingly overwriting the level.
- **Clients** are users who join an existing level of a host. A detailed list of what a client can do is listed below.

Editing Features

- Clients can create, delete, move, rotate and scale through the World Editor
- Clients can also copy and paste objects
- Clients can undo and redo actions
- Not only the host who can save the mission file, clients can also save it. However, any changes made on the client-side will be monitored by the host and only the host will have the final say whether or not to accept the changes made by clients. A pop-up window will inform the host stating that a client is trying to save the mission file. This feature guarantees that only the host has control and to avoid future file mismatch. This feature also ensures that both host and clients have the most up-to-date mission file they are working on collaboratively



- The current editing mode, move, edit or scale, is now controlled through a right click menu, and through the main menu. Quick keys are also assigned. The current editing mode is displayed in the top left corner in the World Editor window
- The right click menu also allows for quick reset of rotation and scale, hiding and showing objects and object deletion and cloning
- Objects in the object tree can be right clicked to hide or unhide them. Folders in the objects tree can be right clicked to hide or unhide entire groups at a time
- An object properties window has been added for precise movements of objects. This can also be hidden or shown by using the menu
- The advanced camera resource has been added, but in addition to changing camera views, tabbing allows for the following of other users in order to view their actions (credit to Thomas Lund for this resource)
- Audio Emitter visual representations with rotating dots, can be hidden or shown in mass to avoid visual confusion
- A scale cursor has been added
- Line thickness of object axis has been increased for easier pick-up

Technical Features

- A login screen to host a level and joining a level editing sessions for client. Since TGE and TGEA are both client and server, level editing Hosting and Joining is a snap
- Your shared environment and assets are only available to your team. Password protected environment must be setup during hosting. Without the correct password, client PCs will not be allowed to join in
- Client object updates automatically scale their update speed based on their selection size to avoid flooding the server with update messages and thus losing real-time object locations



- When the client is updating an object such as moving it, updates for that object from the host are ignored to avoid a 'tug of war' over the object
- The Host may adjust the speed at which objects altered by clients are updated out to all other clients using the "Client Updates" window
- Hiding objects now results in their disappearing and an inability to select them so that they do not interfere with other object selection or editing
- A secondary chat window has been added directly into the editor for quick communication, but will still allow quick keys to be used. It can be hidden or shown using the menu
- Clients cannot save missions without host permission. This will help prevent the unintentional distribution of assets to other parties.
- If a client is missing or not containing the most current terrain file, it will be uploaded to the client
- Camera speeds are automatically synchronized between the host and all clients to maintain smooth movement of the camera



KNOWN LIMITATIONS/BUGS

- Currently only working on TGE 1.5.2 and TGEA 1.x. Future support may be provided for TGB and Torque X 3D.
- When certain interior objects are created users who are not in the editor may crash due to Bad texture handle in rebuildVertexColors (pre-existing)
- Undo and Redo are inconsistent (pre-existing)
- Cycling views through players occasionally skips a player when there are many users present
- At present, Clients cannot create Environment Objects e.g. Sky, Terrain, Audio, Lights etc. but Client can send command to Host to create new Environment Objects. Only a Host can create a new Environment Object. However, clients can Copy and Paste existing Environment Objects present in the level
- There is a temporary lap in screen refresh on the Host when the host is prompted by a client to create a new Environment Object. Hit the F11 key to fix the screen refresh

