PROJECT MAGMA

MYTH II: SOULBLIGHTER

Version 1.8.2 Beta 2

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1. Introduction

Myth II version 1.8.2 is the latest update to Myth II: Soulblighter, bringing numerous new features, bug fixes and improvements to the timeless real time tactical medieval war game.

Myth II 1.8.2 is network compatible with Myth II versions 1.8.x, 1.7.x, 1.6 and 1.5.1, but it is strongly recommended that all players use the latest version, in order to benefit from the game play bug fixes that are enabled only when all players are using Myth II 1.8.2.

A comprehensive list of changes in version 1.8.2 can be found in section "**5. Changes in Version 1.8.2**".

Be sure to visit http://projectmagma.net for information on the game and discussion of the updates, http://gateofstorms.net for online gaming and http://tain.totalcodex.net to download new maps and plugins.

2. Installation

You must already own a copy of Myth II: Soulblighter before using the Myth II 1.8.2 Update Installer. If you do not own a copy of the game, you may download the updated game demo from http://getmyth.com.

a) Download the Myth II 1.8.2 update for your operating system from http://projectmagma.net.

b) Run the installer program and follow the instructions that will be presented to update your copy of Myth II to version 1.8.2.

   The Mac OS X version of the installer also has the option of installing Myth II directly from the CD.

3. About Myth II

Myth is an addictive battlefield strategy game with great depth of gameplay that never grows stale. Unlike other games, Myth wastes no time with growing crops, collecting taxes and raising armies. It cuts right to the chase and focuses on the fighting itself. Nor is Myth a game purely for those with lightning reflexes and rapid key-pressing skills, as success depends just as much on intelligent foresight, planning and use of formations and terrain. Add to this an immersive solo campaign, the ability to play over the internet (even on a slow connection), plus a plethora of high quality 3rd-party plugins (along with tools to make your own) and you have a game that will keep you entertained for years to come.

4. Playing Online

Free online play is available through the Gate of Storms (GoS) game server, where you can enjoy multiplayer Myth II action with players from around the world.

Gate of Storms supports guest accounts, but players are encouraged to register online at

http://gateofstorms.net

To log on to Gate of Storms, simply go to the Multiplayer dialog in Myth II and select the Gate of Storms server before connecting to it. You may need to click the "Server" button if you do not have Gate of Storms selected already.

5. Changes in Version 1.8.2

5.1 Notable Changes

a) Ability to join co-operative games while they're in progress. This is enabled by default, but the host can disable the feature by closing the game before starting it.

b) Comes with an updated higher-resolution Myth II interface. It will be used by default if supported unless a custom interface has been chosen.

c) Notifications via task bar flash (Windows) or dock bounce (Mac OS X) when a player sends you a private message while Myth is in the background.

d) On The Seventh God, the Warlock Elder's fireball attack will now work as intended (1.8 bug).

e) A new "Long Player List" preference allowing more players to be shown in the metaserver lobby.

f) A new preference to persist the camera zoom level between games and launches of Myth.

5.2 Multiplayer Changes

a) Players who drop in multiplayer games will now show up in post-game stats.

b) Co-op games can now have multiple neutral observers by joining the host's neutral observer team.

c) Myth will no longer be put into a glitchy state if the metaserver connection was closed after a game.

d) Metaserver-proxied games will now correctly disallow joining if they are closed.

e) Fixed issue where the host may display an incorrect ping for themselves in-game.

f) Non-host players will no longer send a player list packet to the metaserver when the game starts.

g) Fixed issue where sending chat would not work in the game lobby if the host restarts while you've already entered text to send.

h) The message about leaving an in-progress game will now appear after the chat backlog, instead of before, in the post-game lobby. Also, tweaked its wording.

i) Fixes synchronization bugs when the host manually quits the game after victory or defeat, which will now be properly treated as a disconnect.

j) Player names on postgame perm will now expand to fit available width. Along with interfaces changes, this will now prevent names from being cut off on that screen.

k) Fixed incorrect player colors being used in server-is-observer coop games with a single non-observer player.
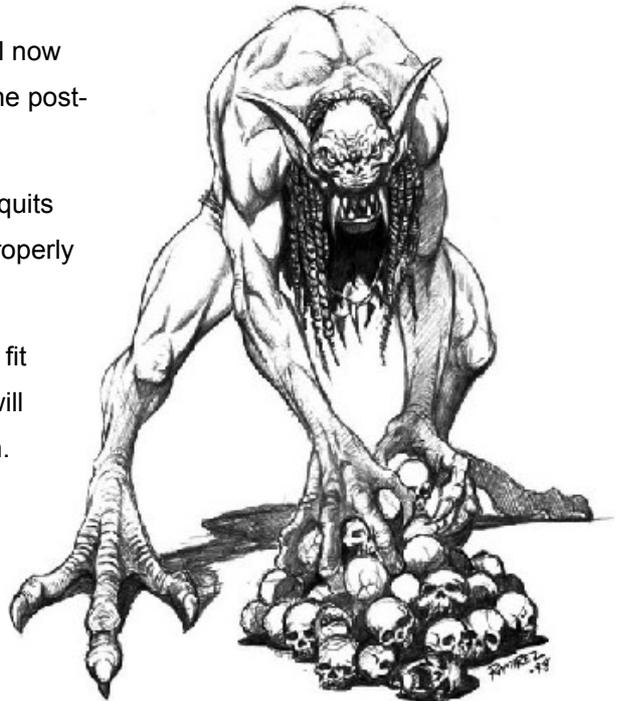
5.3 Map-Making Features

a) Maps may now specify an extended zoom level to use. Valid range is between "-5.0" (full extended zoom) and -0.99998 (Myth II's normal max zoomed out level). Set via via a float field at offset 584 in the mesh file header.

b) Solo maps can now have postgame narrations, via the following fields in the mesh file header:

offset 548: long extra_flags

   (bit #2 = play cutscene before pregame narration instead of after.)

   (bit #3 = play cutscene after postgame narration instead of before.)

offset 552: tagid nar_collection[2] (win,loss)

offset 560: tagid nar_storyline[2] (win,loss)

offset 568: tagid nar_pic_captions[2] (win,loss)

offset 576: tagid nar_sound[2] (win,loss)

c) Narrations may now have multiple caption strings. The string list should have either 1 string, or 1 string for each frame.

5.4 Other Fixes and Improvements

a) Fixed an issue on Mac OS X where the top of the Myth UI would be cut off when initially transitioning to full screen on a secondary monitor. Also, corrected the refresh rate shown in the resolutions list.=

b) On Mac OS X, films downloaded from GateOfStorms.net that have .m2rec extension will now be associated with Myth. They can be double-clicked to play them automatically.

c) Links are now supported in static-text controls. This is used to provide a clickable link to GateOfStorms.net from the metaserver login dialog.

d) Reduced Myth's CPU use when in the background with V-Sync enabled.

e) Disabled hidden functionality to generate preloaded data when starting a game which would get triggered when holding shift/space keys and could cause a crash when starting a game.

f) Fixed problem where bad preferences could cause extended zoom to be enabled and units not being selectable in games.

g) When opening a .m2rec file from outside the game, missing plugins will no longer cause Myth to get stuck on the missing plugins dialog.

h) Improved backwards-compatibility, fixing Out-Of-Sync errors playing back some films from Myth II versions 1.3, 1.5.1, 1.6 and 1.7.2.

i) Fixed issues with bad loop_frame values being set on collection sequences. Now, invalid values are treated as 0.

j) Fixed black background and log error when selecting a recording that has a missing plugin.

k) Removed asserts related to unused constant MAXIMUM_MAP_ACTION_PARAMETERS_SIZE.

6. Changes in Version 1.8.1

6.1 Notable Changes

a) Ability to host games even when firewalled through a new metaserver proxy.

b) Player pings will now be shown in the multiplayer game lobby (toggled by typing ".ping").

c) Support for Hi-DPI / Retina displays on Mac OS X and Windows.

d) On Mac OS X, an improved full-screen menu experience that doesn't switch resolutions.

6.2 Stability Improvements

a) Fixed several crash bugs that would happen when part of an explosion radius went past the east or west edge of the map.

b) Fixed some buffer overflow bugs in the map actions code and improved error message for running out of MA params memory.

c) Fixed a crash bug in the plugin cache when the game is launched first with the Myth CD in, and later with the CD removed.

d) Fixed a hang bug that could happen if a CTRL map action tried to delete a monster twice.

e) Fixed a buffer overflow in dialog list lookahead code.

f) Fix some potential buffer overflows in network failure reason code.

6.3 Gameplay and Game UI Changes

a) When picking up additional charges from an artifact, do not destroy the remaining charges if not all charges can be loaded into an existing inventory item. Instead, allow the artifact to retain the remaining charges, and either be placed into the inventory (if there is room), or remain on the ground otherwise.

b) Fixed bouncing warlock fireball bug (mirror image of the detonating netgame ball bug which was fixed in 1.8.0).

c) Permanent damage now affects health bar height proportionally to the original height (e.g. after receiving 50% permanent damage, the health bar will be half as tall).

d) Made 'switch formations in place' properly keep the reference point when switching between formations with different reference point locations.

e) Clicking on a projectile to pick it up while you have inventory open will now work as expected, instead of giving a more order.

f) You can now band-deselect while holding alt / command.

g) Disabled tilde/deselect interaction with inventory and made the inventory menu hide immediately after an item is chosen.

h) The UT dialog will no longer overlap the game time with interface transparency enabled.

6.4 User Interface Changes

a) Plugins that use the same internal tag ids for their maps as the base game will now display the correct map name on the net pregame screen.

b) If you've shift-selected a non-visited coop level in the network game setup dialog, re-opening that dialog without holding shift will no longer reset your selected level.

c) Prologue (journal) text will now correctly fade out with the rest of journal.

d) The mouse cursor will now be properly hidden during the cutscene after completing The Forge.

e) Fixed display of game prologue/epilogue texts which are taller than 1536 pixels.

f) Fixed incorrect text wrapping in some mission objective lists.

g) When the game is already at minimum speed (1/4th) and the reduce speed button is pressed again, pause the game.

h) Display the epilogue dialog even on maps with no next level (e.g. The Forge), allowing you to see the stats and save the film.

i) The "Plugins" tab in netgame lobby can now be shown even for the host, if its position doesn't overlap with the positions of the various buttons in the interface.

j) Added a new control option, "Right Click Through UI" to re-enable the old behavior that allowed right clicks to affect things underneath dialogs and the control/status bar.

k) Added a new control option, "Tilde Ignores Inventory" for those who dislike the tilde/inventory interaction added in 1.8.0.

l) Increased the input priority of "system key combos" alt+tab, ctrl+g, cmd+f10, cmd+f11 so they can't be accidentally handled by a lower priority system like the game UI.

m) Made the "Pause Game" configurable control actually work.

n) For "custom" scoring games, show the map's first objective (from the description string list) in the game rules space on the status bar.

o) Added a cross-platform screenshot sound (tagid '!scr'); removed "screenshot saved" text.

p) New translation dialog string list (ditl:!trn) allows altering many previously hard-coded strings.

6.5 Metasever-related Changes

a) The default metaserver has now been changed to the GateofStormsNet metaserver plugin.

b) Myth will now remain connected to the metaserver while in game and continue to receive lobby chat. After exiting a game, all the backchat will be visible.

c) When the metaserver connection is lost, a blue-bar notification will be shown in the game lobby as well as in-game and the "Restart" and "Rehost" buttons will be greyed out.

d) In the player info dialog, clicking a player's name will now open their profile in a web browser.

e) The metaserver lobby chat will no longer freeze after 1023 lines of chat.

f) Increased the client's metaserver receive buffer to handle larger numbers of players.

g) Room banners will now correctly display the number of players in a room when above 99.

h) Added a dimmed placeholder string "<guest>" in the metaserver password box, to make it clear that leaving the password blank will result in logging in as a guest.

i) Added .clear command to the metaserver lobby to clear old chat.

j) Fixed an issue where the metaserver lobby room graphic player/game count would not be updated if the player/room list messages were received in an unexpected order.

k) Metaserver buddy/order list tabs and "buddy" button will now be hidden until (and unless) the metaserver sends the buddy/order list packets.

l) The metaserver networking code will no longer use 100% of the CPU in certain cases (e.g. trying to connect to an unreachable server.)

m) Added a new error message for failed metaserver guest logins, e.g. if someone tries to login as a guest, but the name already exists.

n) Added a new metaserver room flag "user not allowed", which allows the metaserver to indicate that a user is not allowed in a room. For example, to tell guest users some rooms are not available.

o) Fixed buddy/order lists not being immediately populated when re-logging into a metaserver. (Not relevant to GoS since it doesn't support this.)

p) The metaserver host string (inside metaserver plugins) now supports a port number to be specified.

6.6 Miscellaneous Other Fixes and Improvements

a) A replay file can now be directly opened in Myth II – either through the command line or by double clicking it (if Myth is not open or is on the main menu screen).

b) Projectiles and units will no longer have their reflections incorrectly shown through the bridges.

c) Fixed bug that would prevent commands from being issued in a multiplayer game that could happen in long-running games (e.g. autohosted) to the 127th player to join.

d) OpenAL now supports non-22050Hz sounds, which exist on some 3rd party maps.

e) Fixed incorrect playback of stereo sounds in mono channels on Windows and Mac. This reverts a 1.7 Mac change that made the Mac sound code mimic the incorrect Windows one.

f) (OpenGL) Fixed a rare bug that could result in incorrect sprite/mesh clipping.

g) When using map action debugging, Myth will now log a message when a MA triggers.

h) Fixed 1.8 bug that prevented plugins from modifying the map prologue and epilogue dialogs (e.g. to remove the title text as is done by DoD). The 'prdi' and 'epdi' dialogs are now modifiable by plugins.

i) Error messages from failing to join a game (e.g. password doesn't match) will now use the text from the user's tags (e.g. localized). Also fixes an issue with simply being unable to join passworded games if local vs. remote strings don't match.

j) Fixed a few 1.3 gameplay compatibility with films (e.g. fixing some original CoD films).

k) The "cutscenes" folder will now be created on startup.

l) When someone tries to use the .vets command as a client, print a message indicating that the command only works when you are the game host.

m) Support png and jpg formats for saving screenshots. Added [Screenshots] section to poweruser.txt to configure several screenshot related settings.

n) Fixed saving of odd-width 16 bit .bmp screenshots.

6.7 Platform Specific Changes

Windows Specific Changes:

a) Added support for arbitrary scaling of the display (i.e. for HiDPI) for OpenGL, DX11, and Software. This is controlled through window menu, which now supports specifying a scaling mode / DPI. This setting is remembered in prefs.

b) Moved to POSIX network code, which fixed a hang in the net code with "Use Multicore".

c) Permanently enabled "Use Multicore" on modern systems and removed the option from the preferences screen.

d) Custom window sizes are now remembered within a game session.

e) Made window centering relative to the "work area" instead of the whole monitor.

f) When transitioning modes, only center the cursor in the game window (client area) if the cursor would otherwise be outside of the game window.

g) Under DirectSound, made sounds audible even when the Myth window is not in focus.

h) Changed the definition of "Automatic" mode to mean fullscreen at the selected resolution when in-game, and windowed mode when not in game.

i) On Windows 8 and higher, force 32 bit color for Direct3D and Software fullscreen, since 16-bit color modes are no longer supported by the OS.

j) Fixed some obscure issues in the windowing code, such as what happens when the window is moved or resized while the cursor is grabbed, or what happens if the window switches from sizable to fixed-size while the user is dragging the border.

k) Improved "render while resizing" code by: tightening synchronization with the render thread, eliminating redundant resize messages, using WM_WINDOWPOSCHANGING instead of WM_SIZING (avoids glitching with aero snap).

Mac OS X Specific Changes:

a) Support for HiDPI / Retina displays and resolutions.

b) Reworked resolution switching code. Now, if you want your menu UI to be fullscreen, Myth will not switch resolution to 640x480 but instead keep your native resolution and scale the menu UI. The "Switch resolutions" and "Windowed" checkboxes in the options dialog have been replaced with a three-option drop down: "Windowed, "Fullscreen" and "Letterbox".

c) Myth will no longer show game resolutions not supported by your monitor in the list. However, you can now specify a custom resolution using UI.GameWidth and UI.GameHeight options in poweruser.txt.

d) Fixed positioning of the window when exiting from full screen on a Retina display Mac.

e) Fixed issue where black corners may appear after transitioning from the fullscreen game to windowed menu UI on newer versions of OS X (e.g. on 10.11).

f) When using a higher-resolution interface (e.g. where the main menu is at 800x600), the journal entry prologue and game epilogue will now be full screen rather than letter-boxed.

a) Made "[Renderer.OpenGL] UseAppleClientStorage" apply to most textures again.

b) When crashing, Myth will now copy the myth_log.txt file, rather than move it, so that its custom icon remains on previous myth_log.txt file.

Linux Specific Changes:

a) Fixed a bug that caused the OpenGL context to be created without a depth buffer on the first run on some configurations.

7. Changes in Version 1.8

7.1 Major Improvements

a) New game type: "King of the Map". This mode uses territories flags and weighted king of the hill scoring based on number of flags held.

b) New "Rehost" and "Restart" buttons in the multiplayer quit/pause dialog for the host, so that it's no longer necessary to drop or suicide to restart the game.

c) New hosting option to display narrations and cutscenes during cooperative multiplayer.

d) Extended zoom: up to 5x in replays and when observing (requires DX11/OpenGL).

e) New "Motion Interpolation" option to make the game even smoother.

f) Improved New Game and Multiplayer New Game dialogs, with enhanced and streamlined plugin management. See "Myth II Help.pdf" for details.

g) Numerous performance optimizations to improve game launch speed, save game load time, and CPU use while playing.

7.2 Game-play Bug Fixes

a) Fixed the vanguard formation so that the tip is right where you clicked, instead of a little bit in front.

b) Flag possession time is no longer accumulated in planning time (a bug exposed by KOTM on meshes where teams start already owning a flag).

c) Removed attack ground "stickiness"; a second normal click won't cause another ground attack.

d) The "guard" command now also works with non-melee units.

e) Fixed a bug which could cause random objects to detonate unexpectedly, potentially breaking the game if it the object was important (e.g. a netgame ball).

f) Fixed some cases where an object could pass through a model (e.g. the ball on Venice).

g) Fixed a bug where too much negative (healing) damage could kill a unit.

h) Fixed a bug where projectiles set to remain after detonation would keep their original monster target and detonating again would hurt that target.

i) Fixed a bug where some projectiles would be duplicated when hitting monsters flagged as "Allows Projectiles to Pass Through". In particular, projectiles that are guided and those that center on target will no longer do this.

j) Units respawned via script will now preserve their controlling player, rather than returning to the team captain.

k) Fixed a 1.7.1 bug that could cause teams to be eliminated on scripted multi maps where the script would temporarily make the units uncontrollable. This bug was seen on maps such as Clue, MythChess and MythRACER.

l) Fixed the survivor count in end game reports on maps where units are made uncontrollable before the game ends, such as Salvation and A Murder of Crows.

m) Improved precision of damage tracking against high-value units and use fractional damage values when computing score and rankings in body count.

n) Fixed the issue where units that do not exist on lower difficulty levels could use up vets that were carried over.

7.3 Graphics/Rendering Improvements (OpenGL and DX11)

a) All new texture decompression code loads new sprite frames more than 2x as fast.

b) Greatly reduced texture memory use by applying tints and hue changes in the pixel shader, instead of generating a unique texture for each tint/hue change combination.

c) Numerous miscellaneous performance optimizations, better fps scaling on more complex scenes.

d) Fixed the issue of units' heads being "cut off" when next to models by rendering sprite depth coordinates as if they were vertical in world space (rather than camera-aligned).

e) Eliminated the sharp edges on sprites by adding a transparent border.

f) New terrain texture tile system means FPS no longer drops while moving the camera.

g) Made the view distance effectively unlimited, eliminating the "hall of mirrors" effect previously seen when viewing areas beyond the maximum view distance.

h) Added mipmaps to all textures, which eliminates aliasing issues (flickering and shimmering with high resolution sprites viewed from a distance), and can also improve performance.

i) Anisotropic filtering now also applies to models and can be enabled without detail textures.

7.4 Graphics/Rendering Improvements (Other)

a) Reduced sprite z-fighting/flickering issues by using enhanced z precision and whole scene sorting.

b) Made the overhead map "visible region polygon" (the yellow box) more accurately reflect what is really on screen.

c) Built-in screenshot support: activated by printscreen or option+f12 (saved to "screenshots" folder). Under OpenGL or DX11, hold shift to capture a "mega" screenshot 8000 pixels wide.

d) In software rendering mode, landscape filtering will now be applied even if the camera is moving.

e) Fixed overlay transparency under the software renderer. (used for interface stuff like the move circle and attack ground icon).

f) Fixed drawing of overhead map blips, so they can't go past the edges on scrolling/highres overheads.

g) Mark modern renderers as "Recommended" in preferences list and sort them to the top.

h) Minimum OpenGL version needed for basic rendering is now OpenGL 1.1 + EXT_bgra.

i) Users can now choose texture cache size on DirectX 10/11, like in OpenGL.

j) A number of small changes to the legacy Direct3D renderer, including making fonts not blurry, making interface transparency consistent with other renderers and support for resolutions not divisible by 32.

k) Fixed a regression in 1.7.2 that caused the mouse cursor to be invisible under 3dfx Glide on some video cards.

l) Fixed some cases of alt tab causing disappearing textures on 3dfx.

m) Fixed "alliance star icon" drawing under hardware rasterizers.

7.5 In-Game User Interface Changes

a) Switching formations in place: simply double-tap the formation # key or shift-click on a formation button in the control bar.

b) In-game ping display (shown below FPS in netgames).

c) A selected unit becoming controllable no longer needs to be re-selected to receive orders.

d) Fixed logic for de-selecting invisible units, so that it uses the same definition of invisible as the rendering code. Thus no more deselecting things which the player can see.

e) Allow selecting hostile ambient life and hunting targets. In replays, allow selecting underwater units.

f) Fixed some bugs in the "look at location" code that caused it to change the camera angle in cases where it shouldn't. This makes the "center selection" command more usable.

g) Unlatched the "center selection" command so that it functions as long as you hold the key down.

h) Inventory control bar and menu can now be used by the team captain on their team mates units, consistent with other unit orders.

i) Fixed control bar buttons disappearing after switching back from control bar inventory mode at 640x480 resolution.

j) Fixed control bar inventory 'none' string override and control bar inventory handling of duplicate items; tweaked control bar inventory button size.

k) While in inventory menu mode, allow selecting the "0. None" inventory item with the tilde/backquote key and the configurable deselect units control, in addition to the zero key.

l) Preserve the camera zoom level when moving the camera by clicking on the overhead map.

m) Fixed multiple selection inventory in the presence of duplicates -- only show the minimum number of dups for all selected units.

n) Right-clicking on the control bar or status bar will no longer issue a click in the game area.

o) Fixed automatic camera movement speed (broken in 1.7 when the camera was allowed to move faster than 30fps).

p) Shift+zoom now cycles through a few preset zoom levels. Note that most of these zoom levels are only available in replays and when observing.

q) The console popup message (such as F1/F2 speed increase) will no longer appear beneath the game hints / quit dialogs.

r) Fixed mouse wheel cycling (both preset and inventory) sometimes jumping too far.

s) Fixed preset cycling bug with overlapping preset groups.

t) Buggy F10-based troop highlighting code has been removed in favor of Caps Lock.

u) Made the unit cost column on the unit trading dialog wide enough for three digit numbers.

v) New "alternate preset recall" control option:

- Recall a preset by pressing one of the # keys (no modifiers required).

- Assigning presets is still done by Alt+# (mappable), but holding the keys down is no longer required.

- To change formations, first hit the F (mappable), followed by the number.

- Shift+F followed by # changes formations "in place".

- Double-tap # selects and centers the view on the preset.

- Shift+# will add/remove a preset from the selection.

7.6 Non-Game User Interface Changes

a) Revamped new game and netgame options dialogs with new separated tagset plugin and mapset plugin selection UI.

b) Several improvements to UI responsiveness make the game feel a lot more speedy.

c) The updated new game dialogs in single and multiplayer will now have their difficulty level names and descriptions (single-player) as well as game type names (multiplayer) updated based on currently selected plugins. Also applies to other players in the game seeing the game description.

d) Allow double click to abort prologues and cutscenes. Single click will no longer abort cutscenes, which is consistent with prologues.

e) Show the UI elements immediately after a map has loaded - including during the "waiting for players" phase.

f) Changed the status bar to not show the first map objective when a coop first loads and to show game rules when viewing a multi recording.

g) New resizable control and status bars allow the game to support every screen resolution. (Previous versions supported only a limited set of resolutions).

h) Status bar unit experience display will now switch to a number at 10 kills, although the old behaviour of switching to a numeric display only when full is still available by double clicking the experience indicator.

i) Screen contents will no longer shift up and down when toggling status or control bars.

j) The unit trading dialog is now floating and horizontally centered on screen instead of replacing the status bar. Only the 640x480 version of the tag is used.

k) Player statistics and the overhead map are now aligned below the unit trading dialog box to prevent them from being hidden during trading at low resolutions.

l) In the Game Hints dialog, Shift + Next Tip will now cycle backwards to the previous tip.

m) All GUI "list" elements can now receive keyboard focus, which lets them be used with the type-to-seek feature which was introduced in 1.7.2.

n) Use number-aware string comparisons to sort UI lists, so that you get 1, 2, 3, instead of 1, 10, 11.

o) Multiplayer checkbox "Allow Old Clients". If unchecked, players on previous versions of the game won't be able to join.

p) Default film names now use the standard ISO date/time format so that they are sorted chronologically in the list.

q) Dialogs for saving / renaming saved games and films will now enforce the maximum tag name length and the save game dialog now allows selecting an existing game to overwrite.

r) Changed the maximum number of items which will show in the saved games list from 256 to 32767.

s) Make the GUI ("out of game") resolution based on the main menu dialog tag, so custom interfaces can create resolutions other than 640x480 by modifying that dialog.

t) Continuous updating of sliders (e.g. volume and gamma sliders in prefs).

u) Removed "Hide Underwater Objects" checkbox which was mainly a performance hack that is no longer necessary with the current optimized rendering code.

v) Fix damage display (in 1.8+ gameplay) to be in terms of unit trading values. In previous versions it was inconsistent with the metaserver scoring due to being incorrectly displayed in the post-game screen as 2.56 times greater than its proper value.

w) Change "Default" To "Myth II Interface" in the interfaces list.

x) Disabled color key and overlay transparency in (i) main menu backgrounds and (ii) bitmap controls - fixes display of images from certain plugins which incorrectly used transparency.

y) Maps without a postgame collection will now use the 'internal game epilogue' (inge) collection, instead of having their postgame skipped entirely.

7.7 Metaserver-related Changes

a) Made metaservers work like interfaces, so they go in plugins instead of the special metaservers folder. The header bytes for metaserver plugins are 00 07 00 00.

b) Improved tracking and display of damage and damage received. Damage values are now properly scaled (i.e. to unit trading cost) and consistent with metaserver scores.

c) Added support for streaming recordings to the metaserver. A metaserver that supports this feature can require/provide recordings for matches on per-room basis.

d) If the metaserver doesn't provide a room IP address, the client will now reuse the metaserver's host name for the room.

e) Failing to join a metaserver game will no longer copy over any part of that game's settings.

f) Metaserver login dialog no longer requires a password to be entered to click "login". Thus guest logins no longer require entering a nonsense field.

g) The metaserver login dialog will automatically substitute "Guest" when logging in with a blank username.

h) Doing a server switch will no longer close the multiplayer dialog.

i) Proper game scores are now sent to the metaserver from observers. Previously observers would send bogus (zeroed) scores.

j) Scores sent to the metaserver now include the correct team index for dropped players (i.e. which team they were originally on before dropping).

k) Improved tracking of damaged received for metaserver stats. Partial damage is now tracked properly rather than unit deaths penalizing the last owner for the full cost of the unit.

l) Show "Tournament" and similar room icons below player counts.

7.8 Other Changes and Fixes

a) New plugin information cache system, which caches plugin data between runs for faster game loads. The first run will be slower while the cache is built, but subsequent runs will be faster.

b) New Auto-Save feature for single player will create save games whenever a new level is reached.

c) New OpenAL audio support (available in preferences). (Note: on Windows, OpenAL must be installed before this will work.)

d) New help ("?") button in preferences in the top right corner.

e) Fixed a serious bug where saving a game whose name consists entirely of "." characters would delete all saved games.

f) Chronological sorting for saved games and newly-saved time-stamped films.

g) Plugin and mesh tagset dependencies will be automatically loaded when possible.

h) Adjusting the game volume via F3/F4 will now affect sounds that have already begun playing, including narrations, intros and cutscenes.

i) Made volume adjustment with F3/F4 finer-grained and continuous. Also, the slider in prefs will now update properly if you use F3/F4 while in prefs.

j) Fixed a bug where local projectiles' sounds could be prematurely silenced.

k) Ambient monster's MA's will now be deleted when they die.

l) Fixed a bug where a MOMA action would cause the new monster to receive a permanent tint from the previous monster, without actually being e.g. paralyzed or stoned. The original unit's tint is no longer carried over.

m) When displaying a cutscene, prologue, epilogue, or replay: auto-hide the mouse cursor after two seconds of inactivity.

n) Display sketches made by the host in replays of coop games.

o) Fixed a game loading failure which could happen after turning off vTFL (or another tagset) and having veteran units.

p) Myth will now always load the default interface before loading any custom interface, preventing problems where a custom interface may be missing some tags.

q) Myth will now be able to correctly read preferences (and other files) if they are set as read-only at the file system level.

r) When attacking a model with ctrl click, don't exit attack select mode. This is consistent with how ctrl clicking on the ground works.

s) Fixed a player statistics % bug that would happen on Hunting that would cause hunting targets to be included in player 0's stats.

t) Fixed a bug that could happen in coop with vets disabled that would cause vets to not be correctly reset, in some cases leading to OOS.

u) Mouse wheel scrolling will no longer affect both the UI and the game simultaneously (e.g. postgame stats list and camera zooming).

v) Fixed a player statistics % bug that would happen on Hunting when a unit was killed by unknown damage (e.g. satchels from the sky on dorf riot).

w) Added "Ignored" option for right click, for those using right click for some system-wide service.

x) Films that use 1.2 gameplay are now properly tracked and reported by Myth II. (Previously, they were still correctly supported, but were reported as 1.3).

y) Fixed vTFL/Anticlump being reset when viewing a film and save the checkbox values between restarts, similar to difficulty level.

z) Winning a coop level will now mark the next level as visited in preferences, so that going to the game options screen will no longer deselect it.

aa) Support loading saved games and films with filenames longer than 31 characters.

bb) Don't do any mouseover cursor effects when the game isn't in focus, the cursor isn't over the window, or the cursor is hidden.

cc) Allow Ctrl+(plus/minus) auto-win/loss cheat to work with the non-keypad versions of those keys too, for people on laptops or without a keypad.

dd) Added .vets game lobby command.

ee) Fixed multiple crash and OOS bugs.

7.9 Platform Specific Changes

Windows Specific Changes:

b) The Myth window can now be resized or maximized normally. Alt-enter or alt-f11 toggles between windowed mode and windowed fullscreen mode on whichever monitor the window is currently on.

c) Added basic multitouch navigation support including: 1) two-finger orbit and zoom, 2) three-finger pan and 3) press-and-tap for right click.

d) When "Use Multicore" is enabled, the Myth window now runs in a separate thread from the game logic. This allows the window to continue to move or resize while the game is busy. This is now enabled by default on Windows Vista and higher.

e) New function to "grab" the cursor (lock the cursor inside the window). Toggle with Ctrl+G. Mouse movement at edges of screen is disabled when grabbing is off.

f) New "32 bit" checkbox in preferences, which applies to all graphics except detail textures. 1.7.2 and earlier have always used 16 bit on Windows.

g) Fixed DirectSound volume ramp. Previously, all volume levels over 60% were equal to full loudness. Also, tweaked the volume ramp formula so the attenuation per gain halving interpolates smoothly from -3dB at the high end to -6dB at the low end. This gives the volume scale a larger range.

h) Prevent redundant mode switches and gamma ramp changes.

i) Added 'Always On Top' and 'Fullscreen' options to the window system menu.

j) Multiple minor bug fixes, several small improvements to multi-monitor support.

k) Improved crash stack trace recording to catch even more types of crashes.

l) Removed dependence on D3DCOMPILER##.DLL for DirectX 11 support.

m) Fixed window position memorization across windowed/FS toggles. (broken in 1.7.2)

n) (Vista+ only) If Myth has administrator rights, disable Win+L key combo while Myth is in focus.

o) Default to windowed instead of automatic when a sufficiently modern video card is detected.

p) Attempt to recover from driver crashes which occur while querying renderer support.

q) Allow the printscreen key screenshot function work on the controls screen instead of treating the printscreen key as a configurable key.

Mac Specific Changes:

a) Myth's file, networking, screen and input code has been completely re-written for the Universal Binary build to use modern Mac OS X APIs.

b) As a benefit of the new file code re-write, symbolic links can now be used for Myth subfolders.

c) The Mac OS X Universal Binary will now work with file paths over 255 characters.

d) The Software renderer is now available on the Mac OS X Universal Binary build.

e) Improved scroll-wheel and trackpad support including faster scroll-zoom and support for smooth scroll-panning (depending on prefs).

f) Window positions are now remembered (within a session) when going from menu to game and vice versa in windowed mode in the Mac OS X Universal Binary build.

g) Fear and Loathing are now built as Universal Binaries.

Linux Specific Changes:

a) Mouse wheel scroll speed now matches Windows.

b) Windowed mode at resolutions at or above the desktop resolution will now go fullscreen instead of being cut off, matching what happens on Windows.

c) The OpenAL shared library will now be unloaded on shutdown, suppressing a console warning.

8. Map Making Changes (1.8)

This section describes the details behind the new mapmaking features and improvements in Myth II 1.8. Some of the features described below require updated versions of the Fear and Loathing tools, which are included with the Myth II 1.8 installer.

8.1 New Map Making Features

a) New "Query Units" map action - 'quni' - that can query the following info from monsters: vitality (current, max, fraction), mana (current, max, fraction), ammunition (current, max, fraction), charges (current, max, fraction), experience, battles survived, held object count, height over mesh and team player and team indexes.

b) Added artifact flag to allow monster overrides that use a different collection. When this flag is used, the override monster tag must specify a unit tag instead of a monster tag.

c) Added a monster flag to hide the selected unit's owner's name.

d) New artifact flag to make artifact charges similar to ammo so that a projectile could be picked up to add more charges and a value to specify maximum charges.

e) Added artifact flag "Charges drop as ammo on death" to be used in conjunction with the flag "pickup adds charges".

f) New unit control (ctrl) param 'plyr' (integer) to detach units to a given player index, as returned from the QUNI param 'plyr'.

g) Added a new ambient sound flag, "Infinite Radius" which means that the sound will be audible over the entire map. The flag is the first bit of the 4-byte integer starting at offset 0 (big endian).

h) Added a new ambient sound flag, "No Position", which means the sound will not have any directional/positional effects applied to it - it will sound the same from anywhere on the map. The flag is the 2nd bit in the flags field (see above).

i) Added new MA parameters 'plyr' and 'team' to restrict which players or teams the MA executes for. This works with the following actions: sound, ambient sound, observer movement, local projectile, in-game fade. Actions using this parameter will always return failure.

j) Added new MA "Unit Indicators" ('uind'), which currently does the same thing as the overhead text part of Unit Control, but can be used with player/team restrictions.

k) New MA 'Custom Scoring' which allows getting/setting/adding/subtracting to teams point scores. Only works for custom and point-based gametypes (hunting, assassin and stampede). (Documented in templates)

l) New munger parameter reboot ('areb'), element type action identifier (action(s) to be rebooted). Rebooting an action causes its state to be rebuilt from its current parameters. This enables param munging on MA types that read parameters only once during their initial activation, which makes regular param munging ineffective. Rebootable actions include but are not limited to: assassin, invisible, lock, meander, melee, suicide, surround, test unit, world knot.

m) New MA 'Custom Endgame' to control when your custom scoring game ends. (Documented in templates)

n) New ambient life map action type 'bear' that makes them attack players' units.

o) New monster extra flag "don't autoequip initial artifacts" which (1) sets the monster back to inventory 0 after giving it the artifacts, and (2) forces the monster to acquire all the initial artifacts, instead of stopping at the first one that cannot be holstered (which is essentially a bug, but can't be fixed now without breaking old plugins).

p) TUNI "holding inventory" ('holi') can now check for a completely empty inventory by specifying NONE ('   ', i.e. 4 spaces) as the parameter.

q) TUNI "holding object" ('hold') can now check that the monster does not currently have any object active by specifying NONE ('   ', i.e. 4 spaces) as the parameter.

r) New CTRL flags to toggle monster netgame target ('ngtf'), hunted creature ('hdcf') and ambient life ('mamb') flags.

8.2 Changes and Bug Fixes to Existing Map Making Features

a) Monster tag based map actions will now work on units created by proj-to-unit promotion.

b) Added some new allowed types in add-on plugins. The complete allowed set is: 'dmap','dtex','form','obpc','soun','soli','stli','temp','text'.

c) Allow 'stli' and 'text' in interface plugins. Prevent interface related tags and observer physics constants from being loaded from regular plugins. Interface collections can still be loaded from plugins, but this is deprecated and may be disabled in future builds.

d) Added a new, corrected implementation of the 'rand' parameter for the geom MA. (The old implementation was buggy and could generate highly non-random results.)

e) The GEOM parameters "Find all using monster owner" and "Find all using monster team" can now be combined with "find all using monster type" to get monsters that only match both, as was originally intended when they were added for 1.7.

f) The CTRL parameter "inventory drop" ('drop'), introduced in 1.7, will now work correctly.

g) Fixed an inconsistency in monster effect modifiers code with artifacts. Now, effects modifiers from the artifact will always be used unless the artifact is specifically flagged not to use them.

h) Increased the ambient monster limit and made ambient monster data garbage collected so that you can have a potentially unlimited number of ambient monsters over the course of a map.

i) The netgame MA "patch version greater than or equal to" ('patc') now returns the correct value for 1.8 (i.e. when compared with "8", returns true). Previously, it would incorrectly report patch version as "5" in 1.6 and 1.7.x (and continues to do so in those versions' gameplay modes).

j) Particle systems will now use the full sequence for rendering (animation, multiple views; each view is one animated particle type).

k) Unified the ambient monster class (fear) and ambient monster palette marker flag (loathing) for the purposes of selection/clicking/targeting. i.e. if either is set, or both are set, the behavior is the same.

l) The "random initial frame" animated model flag will now correctly pick a random frame. Previously, the last frame was never picked.

m) Fixed a bug with monster tag based map actions not working for monster index 0.

n) Disallowed gameplay related tags in interfaces, disallowed interface tags in addons.

o) Game limits display will now show texture cache memory use and game time as ticks.

p) Added the game time index to map action debugging log messages.

q) Increased artifact definitions limit from 128 to 256.

r) Increased monster definitions limit from 128 to 256.

s) Increased local projectile groups limit from 256 to 384.

t) Increased local projectiles limit from 768 to 2048.

9. Power User Preferences

Myth II 1.8.2 provides a mechanism for setting certain preference settings that are not available in the standard preferences user interface. These settings can be set by creating a special "poweruser.txt" file in the Myth II preferences folder.

The format of the file follows a structure that consists of headers, in square brackets, and individual preference settings as key/value pairs. The following listing is an example of such a file:

```
[Section1.Name]
SomePref1=100
SomePref2=False
[Section2.Name]
SomePref3=some value
...
```

The following sections and keys are supported in Myth II 1.8.2:

[Net.Hosting]	
Key	**Description**
PortNumber	Port number used when hosting games. May be useful to bypass firewalls that block specific ports.

[Net.PluginLookup]	
Key	**Description**
WebUrl	URL used when looking up missing plugins. By default, Myth II uses The Tain to find missing plugins, but this setting allows the user to specify a different URL to be used.

[UI]	
Key	**Description**
DebugControlBounds	Draws rectangles to indicate dialog control bounds - useful for those wishing to create custom interfaces. Hardcoded controls are shown in red. The default value is False.
GameWidth	Mac OS X only. Specifies a custom in-game resolution width to use. Should be used in conjunction with GameHeight. Note: The custom resolution must still be selected in Myth II preferences.
GameHeight	Mac OS X only. Specifies a custom in-game resolution height to use. Should be used in conjunction with GameWidth. Note: The custom resolution must still be selected in Myth II preferences.

[Renderer.DirectX11]	
Key	**Description**
ErasePreviousFrame	Erase the previous frame before drawing a new one. This prevents the 'hall of mirrors' effect seen under models and at mesh edges. The default value is False except when viewing films or being an observer.
ClearColor	If ErasePreviousFrame is enabled, the color used to fill the screen, (hex rgb: 0xRRGGBB).
MSAASamples	Enables multisample antialiasing with the specified number of samples. Typical video cards support 2, 4, or 8 samples. The default value is 1.
TextureLodBias	Specifies the texture level of detail bias, as described here: http://www.opengl.org/registry/specs/EXT/texture_lod_bias.txt The default value is -0.5.
TripleBuffer	Enables triple buffering, which can smooth out the frame rate and prevent stuttering when V-sync is enabled. The default value is True.
MaxAnisotropy	Sets the maximum anisotropy level used when anisotropic filtering is enabled in preferences. Typical values are 2, 4, 8 and 16. The default value is 8.

[Renderer.OpenGL]	
Key	**Description**
ErasePreviousFrame	Erase the previous frame before drawing a new one. This prevents the 'hall of mirrors' effect seen under models and at mesh edges. The default value is False except when viewing films or being an observer.
ClearColor	If ErasePreviousFrame is enabled, the color used to fill the screen, (hex rgb: 0xRRGGBB).
UseAppleClientStorage	Use the GL_APPLE_client_storage extension when appropriate. Mac only. The default value is True.
UseDepthTest	Use depth test to ensure correct rendering of models that overlap or intersect with the mesh. The default value is auto-detected to be False on some systems to provide better FPS, while set to True on all other systems.
UseMipMaps	Whether Myth will use mip maps for all textures, which should improve performance with larger sprites or when very zoomed out. Defaults to True on systems where mipmaps are properly supported.
UseShaders	Use OpenGL shaders for increased performance. Defaults to True if OpenGL version is OpenGL 2.1 or higher, except on Intel cards where it defaults to False.
UpdateCMapChunked	Whether Myth will update the color map in chunks, or by sending the full texture. The default value is auto-detected to be False on some systems to provide better FPS, while set to True on all other systems.
UseCmapTiles	Enables colormap tile cache system for improved performance when moving the camera and at large zoom levels. Defaults to true if UseShaders is supported, False otherwise.
ReuseContext	Specifies whether Myth will re-create the OpenGL context for every game or re-use the first one that was created. Defaults to False for Windows Vista or later, True otherwise. Supported in Windows Modern only.
TextureLodBias	Specifies the texture level of detail bias, as described here: http://www.opengl.org/registry/specs/EXT/texture_lod_bias.txt The default value is -0.5.
MSAASamples	Enables multisample antialiasing with the specified number of samples. Typical video cards support 2, 4, or 8 samples. The default value is 1.
MaxAnisotropy	Sets the maximum anisotropy level used when anisotropic filtering is enabled in preferences. Typical values are 2, 4, 8 and 16. The default value is 8.

10. Credits

1.8.x Credits

Core Team:

David Bregman, Windows, Graphics, UI and Core Programming
Alexei Svitkine, Mac and Core Programming
Andrew Lauritzen, DirectX 11, Improved Stats Tracking and Metaserver Features
David Reta, Updated Interfaces, Updated Mapmaking Documentation, Quality Control

Additional Help From:

Chris Arthur, Mapmaking Features
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1.7.x Credits

Core Team:

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David Bregman, Windows and Graphics Programming
Andrew Lauritzen, DirectX 11 Graphics Backend, Gameplay Bug Fixes
David Reta, Updated Interfaces, Updated Mapmaking Documentation, Quality Control

Additional Help From:

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John Fernandes-Salling, Loathing Improvements
Matthew Molloy, Last Minute Bug Fixes
Mike Oldham, Programming, Website, Support Tools
Michael Sheets, Updated Interface Graphics
Iain Simms, Map Making Features Programming
Andrew Sumner, "Overrides Player Tint" Flag

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Paul Jaeger, Programming
Bill Keirstead, Mac OS X Programming
Kyle Maclean, Programming
Michael Sheets, Interface Graphics & Tags
Andrew Sumner, Programming & Tag design
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