



SB Pro PE 3.023 (Full Release) Version History and Release Notes

Version 3.023 is made available only as a full installer (approximately 2.3 GByte download in a four-part self-extracting archive):

www. eSi mGames. com/Downl oads. htm

This **full installer** requires an installation procedure from scratch. We **strongly suggest uninstalling previous versions of Stell Beasts Pro PE and the CodeMeter runtime software before installing it!**

To make sure that there are no leftovers from "pre 3.0" installations, we recommend using the Windows Control Panel's "Add/Remove Programs" utility.

Note: This version will not run without an existing license for STEEL BEASTS Pro PE 3.0!

Licenses may be purchased from the eSim Games web store: http://www.eSimGames.com/purchase.htm (for details, see below)

"Open Beta" licenses, which will expire by Dec 31st anyway, will not work with this version.

Hardware recommendations

The installer combines a 32 bit ("X86") **and** a 64 bit ("X64") version of the STEEL BEASTS executable. On a 32 bit Windows version, only the 32 bit STEEL BEASTS executable will get installed.

On a 64 bit Windows version, both the 32 bit and the 64 bit executable get installed into C:\Programs (and no longer into C:\Programs(X86) as you may be accustomed to from previous versions).

The 32 bit and the 64 bit version are not network compatible to each other. You will need to run possible multiplayer sessions on either version, probably the lowest common denominator. You probably want to settle the question before you start to host a network session.

Downloading, unpacking the self-extracting **full installer** archive, and immediate installation requires up to approximately 7.5GByte harddisk space temporarily. Of these, STEEL BEASTS will claim about three GByte free harddisk space permanently;



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the rest may be freed up through deletion and/or burning the installation files to DVD.

Compared to version 3.002 the hardware requirements remain unchanged: We recommend a 2.5GHz multi-core CPU (faster is better), 2GByte RAM (or up to four for 32 bit Windows versions; more is always possible on X64 Windows versions). 512MByte video RAM (1GByte or more *dedicated* video RAM necessary for the highest settings of shadowmapping), and generally a DirectX 9.0c graphics card supporting Shader Model 3.0. Mouse, keyboard, and monitor are mandatory. A sound card and internet connection are strongly recommended. Joysticks and selected control handle replicas are supported.

STEEL BEASTS requires Windows Vista™/Server 2008™ or later.

Installation Step-by-Step

For the full installer of STEEL BEASTS PRO PE follow the instructions below:

- 1) Download all parts of the multi-part archive on the <u>Downloads page</u> into a temporary folder of your computer, starting with ...part1. exe and ending with ...part4. rar (unless there are more than four parts). (Each of the parts is made to fit one CD-ROM in case that you intend to make backups.)
- 2) Run the ...part1. exe program to extract the setup files from the archive (setup. exe and setup resource files). You are now, in principle, ready to install (go to step 3). If you get an error message in step 2 about a CRC checksum failure the likely reason is that the download process somehow corrupted one or more of the archive files. In this case they must be downloaded again. The most reliable method is to right-click the link on the Downloads page and to select "save target as..." from the context menu (the wording will differ from one web browser to the other)
- 3) Depending on how old your previous version of STEEL BEASTS is (before 3.0x, or after) it may be necessary to uninstall old versions (any 2.x version). The safest method to make sure that you are working from a clean slate is to go to the Windows Start menu | Control Panel | Add/Remove Programs.

 Here, uninstall all entries reading "CodeMeter" or "STEEL BEASTS"
- 4) Run the setup program to start the installation process. If you have DirectX 9.0c already installed you may skip its installation. Do not however skip the CodeMeter runtime installation as version 5.20d contains an important bug fix for users of the Chrome web browser.



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- 5) After the installation is complete you may need to activate a license ticket (descriptions how to do that are in the ticket email from our web shop, including a link to a help thread in the user forum)
- 6) If you own a previous STEEL BEASTS license (version 2.x) it may be necessary to perform a firmware upgrade of the CodeMeter USB stick. Skip this step if you purchased a time-based license for STEEL BEASTS. The procedure is described in the forum help thread.
- 7) The installation is complete go and have fun!

Advice to system administrators:

The STEEL BEASTS installer will now adjust the security settings for the map folder on installation. This obviates the recommendation of previous versions to install SB PRO PE in the security context of an administrator account.

If however you do not want all users on your computer to gain access to the map folder (and with it, the ability to edit and save map files) you may need to revert the security properties of

C:\ProgramData\eSim Games\Steel Beasts\maps

so that normal user accounts may *not* have write access to it and its subdirectories.

The installer no longer forces a reboot after the CodeMeter software update. However, this requires the user to remember that he may need to log off and on again in order to complete the installation of the CodeMeter runtime (which may require a restart of the CodeMeter service).

The installer no terminally aborts if the DirectX 9.0c update fails. The user may choose to continue with the installation. This needs not result in a later error, but if it happens, be prepared for trouble. You will then need to figure out how to install DirectX 9.0c independently. A separate Microsoft installer can be used:

Web Installer: http://www.microsoft.com/en-us/download/details.aspx?id=35
Full Installer: http://www.microsoft.com/en-us/download/details.aspx?id=35

CodeMeter

The CodeMeter runtime which is being installed with this version is 5.20d. This allows connecting to the WebDepot to activate license tickets *without* the use of proprietary web technologies like Java or ActiveX. It will still require that



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the browser security settings for these https connections are set to a "medium" level.

The Chrome-related bug that prevented the successful completion of license ticket activations has been fixed.

The error message for a missing license has been reworded:

"License Failure - please ensure that the CodeMeter Control Center is running, and that you have a valid software or USB-dongle license of the following type available: 'SB Pro PE'"

The installer no longer forces a reboot after the CodeMeter software update. However, this requires the user to remember that he may need to log off and on again in order to complete the installation of the CodeMeter runtime (which may require a restart of the CodeMeter service).

Online Support & Documentation

Visit the official fan site for the collective effort to maintain an online documentation, **the STEEL BEASTS Wiki**: http://www.steelbeasts.com/sbwiki/index.php/Main Page

The user manual has been updated. It may be ordered in print at the eSim Games web shop (www.eSimGames.com/purchase.htm) and gets installed as a PDF with this version — both in English and in German translation.

In this document, text in green color denotes changes between version 3.011 and version 3.019 (all the open beta versions). If you are familiar with the beta versions you can safely skip these sections.

Known Issues

The LEOPARD 1A5-GE (cast turret) has the 3D interior of the LEOPARD 1A5-DK (welded turret). The LEOPARD 2A5A2 has the turret roof of the LEOPARD 2A5-DK. *Squint harder!*

The **Autosave** function is not recommended to be used when working with scenarios based on the **Terrastan** map. These scenarios tend to exceed 100MByte in size, and writing all that junk to disk while you are plotting a route for a unit especially in that area with the many walled fields in the northern part of the map can make it nearly impossible to get any meaningful work done because of the frequent and time-consuming disk accesses.



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Bunkers are somewhat shiny despite having been given a stern warning and having been issued no polish.

Modeling & Simulation Changes

Performed a complete reassessment of all large caliber KE ammunition types. As it turned out there was an undocumented (and erroneous) change of methodology in the performance assessment which was valid, but inconsistent with all other munition estimates. In other cases new data came to light, resulting in numerous performance changes, some of which are substantial. Performance changes exceeding 5% apply to the following rounds:

REDUCTION OF PERFORMANCE:

•	105mm	CMC105

- 105mm DM33
- 105mm M833
- 115mm BM-4
- 115mm BM-5
- 115mm BM-6
- 120mm CL3143
- 120mm DM33 (L55)
- 120mm DM53

INCREASE OF PERFORMANCE:

- 100mm BM-8 100mm BM-20
- 100mm BM-25
- 105mm DM23
- 105mm DM63
- 105mm L64A4
- 105mm M111
- 105mm M735
- 105mm M735A1
- 105mm PfeilPat78
- 105mm PPTFS M/85

- 120mm DM53 (L55)
- 120mm KE-W A2
- 125mm BM-9
- 125mm BM-12
- 125mm BM-15
- 125mm BM-22
- 125mm BM-26
- 125mm BM-29
- 125mm BM-32
- 125mm BM-42
- 115mm BM-21
- 115mm BM-28
- 120mm DM13
- 120mm DM13A1
- 120mm DM23
- 120mm L23A1
- 120mm L26A1
- 120mm L27A1
- 120mm L28A1
- 125mm BM-42M
- 125mm BM-4
- Previous changes in the night time scene rendering have been amended to preserve the view restrictions for computer-controlled units that were implemented prior to version 3.011. The issue has been solved.

User Interface Changes

Added basic touchscreen support for pressing buttons in the 3D world. So far, only "left mouse clicks" are implemented. SB Pro will 'automagically' detect suitable hardware. No configuration is required - or possible.



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Network Sessions

Port Numbers (Host)

The default port numbers have changed. The Host will use the UDP ports 2300-2399 (default) and 2400 (hardcoded). Port 2400 is the "Session Discovery" port and is used by clients to request available sessions. This port allows multiple instances of SB on a LAN or single computer to respond to client requests, thereby allowing the client to build a session list from several available hosts.

SB will choose the first available port in the range of 2300-2399 (default) to use as the "game port". All game networking traffic goes through this port. The game port can be changed in the network session setup screen.

It is required to forward UDP ports 2300 through 2400 in order for WAN clients to access a Host.

Port Numbers (Client)

There is no longer a need for port forwarding!
Clients will use one UDP port in the range 2300-2399 by default.

Bandwidth Limiter (Host)

It is now possible to specify the maximum incoming and outgoing network bandwidth (in kBit/s) that STEEL BEASTS may use. Adjust your settings, if necessary, in the **Network Options** screen. By default STEEL BEASTS will use as much bandwidth as is available (i.e. "unlimited"; 0). However, in order to have some "spare" bandwidth available for other network services like voice chat or similar, you can now restrict the maximum bandwidth usage.

Note: This is an individual setting for each machine. There is no need for clients to specify anything. If at all, only the host may need to apply this limiter as far as STEEL BEASTS specific requirements are concerned. Client might want to apply a limiter for other background activity, but be advised that there is no free lunch in network engineering: Unless you have a blazingly fast VDSL connection, running HD video streams parallel to a STEEL BEASTS session is probably not the greatest idea ever.

Network Connection Type

This window has been disabled. The new network stack supports "Internet UDP" type connections only.

• In the Options | Network menu are now two fields to enter bandwidth limiter values. By default the limiter is OFF (value zero).

No bandwidth limitation works well for any computer with a truly fast broadband connection. In addition it offers the highest speed with which an unknown/new scenario is distributed to the clients

On the other hand, for regular DSL connections and slower having no limiter may result in unwelcome fluctuations of the network connection which may result in the dreaded "network overload" message and, in extreme cases, clients dropping from the session.

Our recommendations: Try out your *true* internet speed with www.Speedtest.org or some other suitable method. Then use



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80...90% of that maximum value for your bandwidth limit. Notice that you must enter the values in kBit/sec even if your download bandwidth is given in Mbit/sec (multiply by one thousand). Using less than the maximum leaves some room for occasional email polls in the background, and voice over IP transmissions.

- Added a 'search' field to the Controls (hotkey) dialog that lets the
 user do an incremental search in the descriptions of all available
 commands only the descriptions which contain the search term will
 be displayed
- Fixed bugs #1006, 1007, 1623, 3368, 3376, 3383, 3420, 3499, 3505, 3514, 3529, 3557, 3558, 3562, 3579 (see chapter "Resolved Bugzilla entries", page 16)

Nav Meshes

- Improved the SB Navmesh Builder (V 10) if the output .ter file does not exist or has size 0 the original .ter file is not deleted
- Exempted the wooden fence from routing around them. This requires a rebuild of the Navmesh in order to take effect

Local obstacle handling

- Generally improved the infantry's ability to maintain formation in restrictive terrain; still not perfect, but every bit helps
- When crossing bridges they will now reliably form a column on the move and trail the lead character, then resume line formation after leaving the bridge
- Tanks will no longer drive around minor walls if their path is routed across them if the wall is weak enough to be crushed
- Reduced the resistance of the pine hedge allowing M113 and Piranha-III vehicles to pass through

Other User Interface Changes

- Fixed the session name being "stolen" from another host (if the client started a host session of his own)
- The 3D view status bar's **Platoon** menu entry is only enabled if the player is owning the platoon's highest ranking combatant
- Improved the timeout handling for lost packets. Clients should drop out of sessions only in severe cases of packet loss ("Network overload")
- Changed the implementation of the dialog showing the available command line options (brought up if the '--help' command line option is specified) to be sized independently of the user's display screen dimension.
- Differentiated gunnery skills for computer-controlled opponents depending on the chosen **Difficulty** level:

Easy difficulty: OpFor gunnery rating is set to 35% **Medium** difficulty: OpFor gunnery rating is 65%



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Hard difficulty: OpFor gunnery rating is 95%

- The default log level is now set to 'TRACE' (the one providing the most detail)
- Added SpinKit support for Leo 1A5/2A4
- Improved scenario file loading time (about 10 sec less)
- Improved infantry squad ability to cross bridges (they will now automatically form a column)

3D Engine:

- Added memory usage info to the framerate counter: Underneath the usual frame rate counter display (toggled by default with Alt+F12), three additional lines have been added:
 - a) "Process": virtual (RAM and/or pagefile) memory the SB process can/does use;
 - b) "Physical": RAM memory that the whole PC can/does use;
 - c) "Pagefile": pagefile memory that the whole PC can/does use

For each type, the current usage (both in absolute numbers as well as in percentage of the total), the total available memory, the free memory, minimum and maximum usage during the SB session will be displayed

Infantry/3D Characters:

- Fixed the improper alignment of the 'team A' and 'team B' icons in the status bar if either of these teams took losses.
- With this change, the 3D view status bar's 'Platoon' menu entry is only enabled if the player owns the platoon's ranking combatant.

Map Editor:

- It is now possible to split roads by holding down the **Alt** key Note that this complements the existing functionality of a node being added if a road is being clicked on while the **Shift** key is being pressed and a node being removed if the road is being clicked while the **Ctrl** key is pressed while clicking on the point of a selected road
- The mouse cursor will now indicate which mode is active

Mission Editor:

- Hold the Shift key when clicking on the MISSION EDITOR entry in the MAIN MENU to immediately select and load the desired scenario rather than loading the blank map first.
- Scenario files may now be loaded for testing without having to go through the editor. Hold the **Alt** key while clicking on the 'MISSION EDITOR' menu entry. A dialog will ask for the file to be tested. If all parties in the scenario are password protected, the user will be returned to the MAIN MENU, otherwise he will start testing the scenario as the first non-password protected party (note that it is possible to switch parties while testing, provided the party pass-



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words are known). If the user presses 'quit' from the debrief phase, he will then load the Mission Editor just as usual

- Reduced minimum width/height for rectangle/oval graphics to 1m
- Reduced the Mission Editor startup time thanks to more efficient resource handling
- Enabled the 'Set Mission Start Time' window to be enabled while in the Mission Editor's 3d preview mode. This allows the scenario designer to more quickly change the time of day in order to see its consequences on light level.

The window can be brought up by pressing the **Alt+S** key combination. In this mode the 'Apply' button updates the new time setting without closing the dialog

Network Sessions:

 Vehicle drivers may now turn off engines in network sessions. This fixes bug #3043:

Only commanders of ranking vehicles can command a (=their) formation to turn engines on/off

Such a 'formation-wide' command will be ignored by vehicles in the formation which have a human driver (these will hear the 'countdown' radio message but are free to ignore it)

For a vehicle with an Al driver, only its owner (typically its commander) is allowed to command to turn the engine on/off For a vehicle with a human driver, only he is allowed to command to turn the engine on/off (so the human driver need not be the owner of the vehicle!)

If some vehicles in a formation have their engines off and others have it on, the 'platoon' menu in the status bar will now show both 'engine on' and 'engine off' commands (to allow the formation leader to force a given state)

In case some vehicles in a formation have their engines off and others have it on, pressing the 'engine toggle' key (as done by the formation leader) will take the formation leader's vehicle as a reference (i.e. if his vehicle has the engine on, he will command the platoon to turn their engines off, and vice versa).

Local i zati on:

Updated Danish strings

Updated English (UK) strings

Updated English (US) strings

Updated Finnish strings

Updated French strings

Updated **German** strings

Added PDF of ze German Endanwenderreferenzdokument für gesteigerte Benutzerfreundlichkeit und Panzerfährvergnøgen (it's located in the "Deutsch" subdirectory of "Other Documents")

Updated Russian strings

Updated **Spanish** strings

Updated **Swedish** strings



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- Steel Beasts will now display a warning message box if a scenario is being loaded using a custom 'correlated' map that however is not installed on the local machine.

 Note that the Mission Editor will just proceed, resulting in loading an empty mission. However, a message will be added to the logfile in any case
- The **Formation** submenu of a unit's property menu will now be immediately refreshed upon assignation of a different tactic (since that may change the used formation)

Other Important Changes

- Updated the terrain rendering to better handle low light conditions. However, this means that it gets REALLY DARK now. Things look better during dusk and dawn, though.

 Also, shadowmapping is now disabled while the sun is below the horizon
- Improved the handling of autocannon ammo feed mechanisms so that when changing the feed one last round of the old ammo type must be fired. Previously this lead to ammo count divergences between the machine controlling the gunner and other participants in network sessions
- Unbuttoned mounted troops of PCs will now only shoot at targets within a 45° arc to both sides of where they're aiming
- Reduced scenario loading times by, on average, another ten seconds



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Updated units/systems with crew positions

ASCOD PIZARRO:

Animated the manual gun elevation/traverse cranks Added an Instant Action scenario for it

ASCOD ULAN:

Updated the LOD1 model

AT-3 SAGGER TEAMS:

Increased the default missile count by one

BRDM-2:

Fixed the BRDM-2 "TANK RANGE" scenario

The TC hatch will now remain closed whenever the vehicle is 'combat ready', so the gun will not be elevated.

BTR-80:

The TC hatch will now remain closed whenever the vehicle is 'combat ready', so the gun will not be elevated.

Removed the thermal sight that the commander erroneously had

Bushmaster:

Updated the LOD1 model

CENTAURO:

Animated the manual gun elevation/traverse cranks

CHALLENGER 2:

Added new ammunition: L26 APFSDS ("CHARM1" ... the real one) Reduced the reflectivity of the antennas

Updated the turret interior (plugged a hole in the mantlet region)

Updated the vulnerability definition

Removed the commander's MG that never was (but still produced damage reports)

Ci vi I i ans:

Fixed bug #3485 (see bug list); in the external observer's view the camera will no longer bob up and down

CV90 (all variants):

Animated the manual gun elevation/traverse cranks

CV90/30-FI:

Updated the turret interior Smokes the right grenades now Winterized the turret roof texture some more

CV90/35:

With 'turretclock' damage active the turret yaw indication in the various VIS and sight views is no longer updated (the turret will appear to just point forward)

The commander's sight's ballistic door was (visually) controlled by the gunner; it is now operated by the TC's manual lever

Improved some previously rather blurred VIS icons



These vehicles may now burn and smoke when destroyed

CV90/35-NL:

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Updated the vulnerability definition

ERCWS-M:

Updated the 40mm AGS variant (reloading time)

FV510 Warrior IFV:

Added a number of **OpFor** textures (BMP-2 vismod) Updated the vulnerability definition Corrected the default platoon strength from 3 to 4 vehicles

GTK Boxer (all variants):

The driver may no longer unbutton Updated LOD3 model/vehicle vulnerability Updated the vehicle script

GTK Boxer Ambulance:

Updated the vulnerability definition

Infantry (all variants):

While crawling, infantry will start swimming on water surfaces less than 1m deep $\,$

Fixed bug #3497 (see bug list); stamina limits can no longer be bypassed by pressing ${\bf C}$

Infantry (ATGM teams):

Fixed bug #3420 (see bug list); in network sessions ATGM teams will now set up their missile launchers completely

Infantry (LEMUR teams):

Removed a confusing, duplicated "Lemur" entry from the unit's context menu. The corresponding settings can still be configured using the "Optional Weapon" submenu

Infantry (RPG gunners):

Calmed down the RPG gunner to cure a nervous twitch that occurred immediately before firing

JAVELIN ATGM:

The missile no longer defaults to direct attack mode

LEMUR RWS:

Updated the 40mm AGS variant (reloading time) Slightly decreased the size of the icon in the lower left corner symbolizing the correct magnification so that it does not overlap with the surrounding text

LEOPARD 1A5 (all variants):

Corrected the engine startup delay Animated the manual gun elevation/traverse cranks

LEOPARD 1A5-DK:

Added normal and specular texture Updated diffuse texture



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LEOPARD 2A4:

Updated the armor file to fix an error that could result in a kill if the idler wheel was hit from the front Fixed a render bug of the primary sight's reticule

LEOPARD 2A5 (all variants):

Animated the emergency turret control joystick Fixed a render bug of the primary sight's reticule

LEOPARD 2A5A1-DK:

Is now equipped with 120mm DM11 HE-T

LEOPARD 2A5A2-DK:

Updated thermal texture to blend better with the surrounding terrain's ambient brightness level

LEOPARD AS1:

Added normal and specular texture Corrected the engine startup delay Updated diffuse texture Updated the thermal **OpFor** texture Updated winter textures

LEOPARDO 2E:

Animated the emergency turret control joystick Added a missing LOD2 track texture Updated the vulnerability definition

M1 ABRAMS (all variants):

Animated the manual gun elevation/traverse cranks Updated the vulnerability definition

M1(IP) ABRAMS:

Corrected the power-to-weight ratio

M1A1 ABRAMS:

Updated the desert tan texture Corrected the power-to-weight ratio Fixed bug #3388 (see bug list)

M1A1(HA) ABRAMS:

Updated the desert tan texture Fixed bug #3388 (see bug list)

M1A2 SEP ABRAMS:

The gunner's magnification knob will now reliably select the desired zoom level
Updated the desert tan texture
Updated some OpFor diffuse textures
Updated a thermal texture
Fixed bug #3513 (see bug list)
Fixed bug #3595 (see bug list)
Fixed bug #3623 (see bug list)



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M2/M3 Bradley (all variants):

Animated the manual gun elevation/traverse cranks Updated the desert tan texture Updated the missile launcher box animation Fixed a bug where the turret went into the ATGM reload position while the tank was travelling through woods (reloading of TOWs while on the move should not be possible). Fixed bug #3409 (see bug list) - vehicle commander may now

also operate the center control panel

Fixed bug #3482 (see bug list) - vehicle commander may now change sight magnification

M113G4-DK:

Corrected some problems on the LOD3 model related to the shadow casting $\,$

Fixed bug #3558 (see bug list)

M901:

Updated a turret traverse sound

T-62:

Removed the 115mm BM-5 APFSDS round which is a two-piece design for T-64 prototypes that were fitted with the 115mm gun Updated the turret interior Updated ${\bf RU}$ and ${\bf OpFor}$ texture

T-72 (all variants):

Fixed bug #3421 (see buglist #3650)

T-72M:

Removed the 3BM-42M as an optional ammunition (does not fit into the Loader)

Fixed bug disabling the 'stabilized observation' mode

T-72M1:

Updated the desert texture

Removed the 3BM-42M as an optional ammunition (does not fit into the loader)

UAV:

Fixed bug #3404 (see bug list) Fixed bug #3568 (see bug list)

WISENT ARV:

Added smoke grenades



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Changes for units/systems without crew positions

2S1:

Updated the vulnerability definition

AH-64A APACHE gunship helicopter:

Added AGM-114L missile to the ammo selection to approximate Longbow capabilities in scenarios. Use with consideration. Updated the cockpit glass' specular texture Updated normal map texture Adjusted vulnerability model

BMP-1 AMBULANCE:

Reduced commander's hatch rotation limit

BMP-3 IFV:

The default missile is now the 1990 model AT-5b

Centuri on:

Added a missing thermal track texture
Added normal and specular textures
Adjusted vulnerability model
Corrected a track texture issue with the LOD1
Corrected the coax MG and the main gun ammo count
Corrected the turning radius and turn type
Corrected the steering type
Metrified vehicle mass, power-to-weight ratio, and max. speed
Plugged a roadwheel hole in the LOD2 3D model

CH-146 GRIFFON transport helicopter:

Adjusted vulnerability model

CIVILIAN VEHICLES:

Fixed bug #3488 (see bug list) Fixed bug #3575 (see bug list)

Fennek LRV:

Updated a thermal texture; cal .50 gun barrel is now hot

HELI COPTERS:

Standardized vulnerability definitions and related AI control parameters; ground troops should no longer waste small arms fire on them unless they are extremely close

Fixed bug #2870 (see bug list) Fixed bug #3404 (see bug list) Fixed bug #3439 (see bug list) Fixed bug #3568 (see bug list)

Mi - 24 HIND-E gunship helicopter:

Added S-8 unguided rocket as optional armament Adjusted the textures around the canopy Adjusted vulnerability model Adjusted the LOD2 3D model

LEOPARD 1A2:

Corrected the engine startup delay



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Corrected the default coax ammunition Fixed bug #3163 (see bug list)

LEOPARD 1V:

Corrected the engine startup delay Fixed bug #3163 (see bug list)

M88A2:

Updated the Towns tutorial

Marder 1A3:

Updated thermal texture

Updated the normal map texture Updated the diffuse texture Adjusted the specular map texture

T-55:

Updated RU and OpFor texture

T-64A:

Removed the 3BM-42M as an optional ammunition (does not fit into the loader)

T-64B:

Updated the default ammo mix to better reflect doctrine Removed the 3BM-42M as an optional ammunition (does not fit into the loader)

T-72M4:

Removed the 3BM-42M as an optional ammunition (does not fit into the loader) $\,$

T-72B (earl y):

Updated the default ammo mix to better reflect doctrine Reduced the ammo storage capacity by one

T-72B:

Updated the desert texture

Removed the 3BM-42M as an optional ammunition (does not fit into the loader)

Reduced the ammo storage capacity by one

T-72BV:

Updated the desert texture

Removed the 3BM-42M as an optional ammunition (does not fit into the loader)

T-80U:

Updated the default ammo $\min x$ to better reflect doctrine Updated the \min gun fire sound

T-90A:

Updated the track 3D model and texture to fix a transparency issue with the center guides

T-90S:

Updated the default ammo mix to better reflect doctrine



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Tiger ARH gunship helicopter:

Adjusted vulnerability model Updated the **CN** texture

Techni cal -T 1.2t:

Removed some odd and obsolete textures Fixed bug #3586 (see bug list)

TECHNI CAL-F 4x4:

Improved a normal map texture

TECHNI CAL-GAZ wi th ZU-23/2:

Corrected the ammo count (stored and ready)

WI ESEL:

Added a thermal track texture

Mi nor non-vehi cl e changes

- Removed an extra tick in the **DK** style binocular view
- Bunkers blend better into the surrounding terrain
- Logging information about network messages will now only be written
 if there is actually any information to log (ie not in offline
 mode, or if no messages were sent at all)
- Possible object collisions are now resolved when moving combatants around in the **Planning Phase** (e.g. when changing a unit's orientation) or shifting its location within a deployment zone
- Rubble is less noisy now
- Updated a number of decal files; helicopters, ze Germans, Russkij
- Updated a dirt texture that was not dirty enough
- Normalized the normal textures for roads, rails, and water streams
- Reduced the overall brightness of some dirt paths and roads to better match the surrounding terrain
- Removed a road specular texture that was too unspecular
- Updated the Instant Action scenarios to prevent units piling up on top of each other, those filthy degenerates
- Adjusted the generic SB Pro PE callsign template to be even more generic
- Watered down two water textures

Minor vehicle-related changes

When dismounting units from APCs with troop hatches, only those hatches will close where no troops remain. (Previously, any remaining troops would be forced to button up as the hatches were closed upon any unit dismounting)



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Bug fixes without database entry

- Fixed the "road shadow" bug, see http://www.steelbeasts.com/sbforums/showthread.php?t=20455
- Fixed the Weather Control screen's "Wind speed" slider and display to use matching values.
- Fixed a bug in the ballistic model for KE rounds they were not properly slowed down when impacting an obstacle.
- The HUD overlay will now be re-enabled when starting a new mission
- Fixed a bug in the 'condition' window where a textbox showing a unit's callsign was not properly resized to accommodate long callsigns (see http://www.steelbeasts.com/sbforums/showthread.php?p=256281)
- Added a number of missing damages to the 'damage if' and 'repair if' menus in the Mission Editor (Laser warning receiver, missile launcher, autoloader, smoke grenades, and searchlight). Also made a further change to bug #1099 (the 'gunner' damage was missing from the 'repair if' menu)
- Fixed a bug where, in multiplayer sessions, troops could not mount a vehicle owned by another player (if this player was not the host)
- Fixed crash in "In Progress Session Join Wizard" caused by a combination of mouse wheel & key input
- Fixed a crash bug in "In Progress Session Join Wizard" caused by a combination of mouse wheel & key input
- Fixed a bug that could crash a session host if a client disconnected at just the wrong time
- Corrected the "Russian mil" width in the Russian binocular view
- Improved infantry ability to stay in formation in difficult terrain
- Fixed Challenger 2 SpinKit fire button support
- Fixed a bug where the TC would not scan along the gun in case a 'scan here' command was issued
- Generally improved the behavior of missile equipped vehicles, partially by addressing known bugs (see bug list in next chapter), partially by other means
- Generally improved the behavior of vehicles trying to reload preferred ammo in situations when they really should not, i.e. when facing an enemy and still having alternative ammo ready. The default behavior of NOT trying to reload when on a route has not been changed, except one special case: if a vehicle has NO ready ammo of any type left whatsoever, reloading is allowed (assuming all other criteria are met like not facing an enemy, need to stop while reload etc.).
- Fixed a bug where the computer-controlled gunner in the M2/M3 BRADLEY would change the magnification of the daysight channel but not that of the thermal channel (impossible to do in the real vehicle), which could then lead to TOW missiles aborting if a human GNR took over and did not toggle view magnification at least once
- Fixed some render artifacts in the vision block view that affected various vehicles
- · Contact reports by split formations will now be displayed to the user
- Fixed bug that could lead to enemy units not being reported as detected in network sessions so other clients would not get to see their unit icons on the map
- Fixed a bug that could cause the AAR camera not attaching itself properly to the object (or rather combatant) an event was about
- Made the application return to the Main Menu if the user tried to open the Mission Editor with the default tile map ('flat.ter') missing (this can happen if one of multiple SB version installed in parallel were uninstalled).
 - Previously the Mission Editor would still load but would be (mostly) non-functional, showing very strange behavior, and while an error entry would be generated in the log file the user would be quite likely to miss it
- Fixed a bug where the 'drive here' 'lase' etc. mouse cursor icon might have been slightly displaced from where it was actually pointing at (noticeable in the soldier's binocular view)
- Fixed a number of bugs with editing 'in-progress' saves (primarily in conjunction with attached troops).
 Also changed the behavior in the MISSION EDITOR so that manipulating a destroyed unit's 'status' flag, all its damages will be repaired.



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Note that troop formations (as opposed to vehicle formations) will be recombined into their original formation when doing this

- Fixed a bug with editing 'in-progress' saves containing UAVs/UGVs
- Selecting 'load troops' or 'unload troops' in a multi-vehicle symbol's menu in the status bar will now
 cause all the unit's vehicles to load or unload their troops previously only the lead vehicle would do
 this
- Corrected the ATGM 114K Hellfire to be laser-guided (removed the incorrect 'fire-and-forget' capability)
- Fixed a bug where a complete vehicle formation was considered 'split' when it was carrying troops (so that the UI would offer the user to 'attach' the selected unit when this was actually not possible/needed
- Set the input focus to the 'new unit' window's 'OK' button if the window is brought up (so that when using the mouse wheel the map is not zoomed in/out)
- Fixed M1A2 SEP gunner magnification knob, it was not always selecting the correct magnification level
- Fixed a possible issue with reference points in x64 builds
- Killing a boresight panel is no longer considered fratricide
- Fixed bug where the 3D view status bar's 'Vehicle' menu entry was grayed out if the player was in a vehicle's driving position, even if it would allow him to open said menu in order to fire smoke grenades
 Note that it is now possible for the 'Vehicle' menu entry to be drawn in black font (= 'active') even if the vehicle in question cannot fire smoke grenades
- Fixed issue in the CV9035s where the TC's ballistic door was (visually) controlled by the gunner, and not
 by the TC's manual lever
- Fixed issue on the CV9030FI where the action of the first round being loaded was not correctly communicated to non-gun-controlling clients in a MP environment. Until the first 'real' shot was being fired, a divergence of one shot was shown in the ammo counts (only really noticeable if TC and GNR were sitting in the same vehicle).
- Fixed bug disabling the 'stabilized observation' mode in the T-72M
- Fixed a small memory leak.
- Fixed bug introduced a while earlier that hindered the creation of mixed vehicle formations.
- Fixed an (artillery) Al gunner calculation, which under some circumstances would break the 'rounds per minute' calculation (so the guns would always fire at their maximum ROF; about three shots per minute with the guns currently in SB).
- Fixed unchecked pointer access when loading artwork resources meshes without any materials assigned to them would crash the application.
- Removed extra 'tick' in the 'DK-style' binoculars.
- Fixed bug where the temperature was not correctly recalculated while a mission was in progress.
- Fixed bug in all Leopard tanks that allowed TCs to enter ranges exceeding the nominal FCS maximum
 ranges (not to mention the limits of their input devices). Since this input is actually meant to simulate the
 Kommandantenanzeigegerät, which limits the range to 2000m, the code has been changed to reflect that
 restriction (the user may still input values exceeding that but the actually processed value will be
 clamped to the 900-2000m range).
- Fixed bug that caused a unit's combatants to be reset to face east when moving them around in MP sessions (using the instructor host functionality or while placing them in a deployment zone) if they were not on a route or did not have a battle position assigned.
- Addendum to bug #2234 ("Allow "Instructor Host" functionality in "Scenario Testing" mode")
 Some vehicles displayed the 'overhead weapon station' and 'automatic fire' damage entries even if they were not actually equipped with these systems.
- Addendum to bug #2657 (Numpad-* controls need to be remapped). One consequence of the "Toggle
 TIS field of view" hotkey being remapped to 'N' was that in the CV9035 and CV9030 interiors 'leaning' in
 the gunner's position (which also by default is mapped to the 'N' key) produced an audible 'reticle
 change' sound. This had been fixed again



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- Changed the introduction date of the 'RPG-22 Netto' weapon to 1980.
- Fixed a problem related to maps containing custom map objects (such as TerraTools generated); they will no longer crash SB Pro upon 'picking' a different map area or when replacing the map wholesale
- Fixed a bug where attached guns would not be rendered correctly while in the planning or AAR phase
- Fixed a TOW launcher sound issue (cut off up/down sound)

Resolved Bugzilla entries

Bug description is listed only if the bug status changed since version 3.011:

- Fixed bug #909; the network stack which has been in 'public beta' for a while, has now been officially implemented. Note that with this change, the minimum required operating system is 'Windows XP SP2' (for the 32 bit version) and Windows Vista (for the 64 bit version)
- Fixed bug #982; it is no longer problematic to delete the last node of a custom line, see http://www.steelbeasts.com/sbforums/showthread.php?t=20556
- Fixed bug #1006; In the Planning Phase, the Options menu is now enabled; all users may see and use
 the BP main attention sectors. This will be automatically disabled once the Execution Phase starts
- Fixed bug #1007 and #1623; changes to a formation's orientation and formation style (including spacing) done during a network session's Planning Phase will now be transmitted to other clients, so that the 3d preview and the battle position sectors of fire reflect the updated state. This also applies when moving units within a deployment zone.
 - Note however that if a formation is set to be in a battle position (i.e. if the battle position marker is being displayed), they will immediately change from the specified formation to 'line' formation (reset the tactics to 'None' after customizing their orientation to avoid that)
- Fixed bug #1623; see #1007
- Bug #1648 "Vehicles frequently get "stuck" near buildings"
 Collision code now allows the vehicle to back out of the collision object's center if they intersect
- Fixed bug #1968; infantry may now walk under bridges
- Fixed bug #2189; 40mm 3P rounds in proximity fuze mode will no longer explode immediately after leaving the muzzle
- Fixed bug #2207; the T-72M1's autoloader control unit's switch order is now correct
- Fixed bug #2386; missile equipped vehicles will no longer fiddle around with ATGM reloading procedures when facing enemy if they still have suitable main gun ammunition ready
- Fixed bug #2565; IFVs and APCs should no longer freeze in place
- Fixed bug #2835; MICLIC trailer tracks (and wheels) are now animated
- Fixed bug #2870; on **Assault** routes, helicopters will no longer stop. They will no longer fire ATGMs when assaulting. They can and will fire unquided rockets however
- Fixed bug #3131; added the "Unity Sight" to the View menu (and hotkey list) for the ASCOD ULAN
- Fixed bug #3163; Leopard 1V and 1A2 will now default to 105mm PfeilPat78Lsp
- Bug #3181/#3457 "Roads Overlap Buildings "/ "'Line objects' should not be drawn on top of roads"
 Roads will now be drawn on top of everything but buildings.
- Bug #3278 "AGM-114C Hellfire"
 The missile now requires continuous line-of-sight during its flight time.
- Fixed bug #3299; the commander's hatch of BRDM-2s and BTR-80s will now remain closed while the vehicle is set to 'combat ready' status
- Partially fixed bug #3322; at least the radar-guided AA guns (ZSU-23/4, 2S6) will no longer pivot steer during air defense engagements
- Fixed bug #3324; infantry on Scout routes will now crouch-walk rather than crawl



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- Fixed bug #3329; off-map artillery may no longer fire more than 15 rounds per tube (see also #3434).
 The "rounds per tube" for off-map artillery is now limited to 8.
 The "rounds per tube per minute" (fire rate) for off-map artillery is now limited to 4
 The maximum duration for off-map artillery strikes is now limited to 2 min at maximum rate of fire.
 Longer durations require a reduction in the ROF
- Fixed bug #3367; Javelin ATGM no longer defaults to direct attack mode
- Fixed bug #3368; if the session host quits during the **Planning Phase**, all clients are immediately transported back to the Assembly Hall rather than looking at the (potentially opposing) Blueforce map screen
- Fixed bug #3376; when clients **Join in Progress** the counter for user kills and losses is no longer reset to zero for everyone (which also could affect the mission score)
- Fixed bug #3379; all vehicle emplacements should now have the proper depth irrespective if a vehicle of
 the assigned type is actually present in the scenario; also added two new types (Leo 2A5 and M1A2SEP)
 to account for the raised periscope height
- Bug #3382 "TOW missile launcher (infantry ATGM team) next to a building fires its missile skywards."
- Fixed bug #3383; after self-destruction, FASCAM type mine obstacles will now be removed from the network clients' map screens
- Fixed bug #3386; the 2D map LOS tool will now work again as intended (some obstacles were previously ignored)
- Fixed bug #3387; Antialiasing will now REALLY be disabled if the slider is set to zero
- Fixed bug #3388; transiting to the vision blocks in the M1A1 and M1A1(HA) works now (F4)
- Fixed bug #3393; repaired suspension damage will now also eliminate the wonky driving
- Fixed bug #3396; removed the entry "Set minimum light level" from the Mission Editor's Options menu
- Fixed bug #3397;
- Fixed bug #3398; night combat works again (to the extent possible without battlefield illumination)
- Fixed bug #3399; you may now lase waypoints from inside a vehicle's driving cabin
- Fixed bug #3404; Beautified the HUD for helicopters and the UAV. The lower left corner of the HUD will
 now show "ROUTE" if the unit is on route. The lower right corner will show which height setting is selected (if active, i.e. GROUND, HOVER, TREE, NORM). Only UAVs will have the additional map coordinate
 output above the HUD
- Fixed bug #3408; M2/M3 Bradley driver's NVG is now rendered greenscale
- Fixed bug #3409; inside the M2/M3 Bradley vehicles the commander may now directly click on all buttons in the turret interior (select ammunition/rate of fire). Using the hotkeys the commander may only suggest the ammo type and ROF to be used, except in the case of overriding an Al gunner
- Fixed bug #3417; when selecting visibility: on/off for computer-owned routes and waypoints, the checkmark will now immediately update
- Fixed bug #3420; ATGM teams owned by clients in network sessions will now properly set up their launchers without a personal visit by the commanding player
- Fixed bug #3421, see #3652;
- Fixed bug #3426; the installer will now create a second shortcut (same name, but with (Debug) appended) featuring the additional command line parameter setting the log level to TRACE; it is best left ignored until asked by tech support to use it
- Fixed bug #3427; start STEEL BEASTS with the command line option --safemode to ignore (and reset!) the
 user's options.dat file. This can be used to recover from a wrong or invalid configuration file (for example if a screen resolution that is not supported by the current display (adapter) was specified). specifying
 this command line will make SB Pro ignore all other options (the log level will be set to TRACE)
- Fixed bug #3428;
- Fixed bug #3431; Steel Beasts should no longer crash in the assembly hall if the command line parameter --fullscreenwindow=TRUE
- Fixed bug #3432 (the behavior of Leopard 1A5 fire control system for laser ranges exceeding 3990m)



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- Fixed bug #3434; off-map artillery may no longer fire for excessive durations (see also #3329)

 The maximum duration for off-map artillery is now limited to 2 minutes at the maximum fire rate. One can still achieve longer durations by using a lower fire rate
- Fixed bug #3439; helicopters will now use unguided rockets against infantry targets
- Fixed bug #3448
- Bug #3456 "Mission Editor: change the color of the text showing the current scenario name to black"
- Fixed bug #3459; Leopard 1A5 and later have now a uniform max laser range of 9990m
- Fixed bug #3465; in the Mission Editor and in the Map Editor, changed the display of the current mission (map) name to black text
- Bug #3469 "Mission Editor: do not always move 'attached' troops with their PCs"
 Dismounted attached troops that have tactics assigned will now no longer move along with their assigned PC if it is being moved by the scenario designer. Note that loading a troop formation into a vehicle will reset the tactics to 'None'.
- Fixed bug #3482; the M2/M3 Bradley commander may now toggle sight magnification while overriding
- Bug #3483 "Leopard 2A4: Peri should black out during firing"
 Firing via emergency trigger is not covered (so it will still black out under these circumstances)
- Fixed bug #3485; when following civilian characters in the external observer's view the camera will no longer bob up and down
- Fixed bug #3488; the Sedan-P has now a texture mapped to its windows
- Fixed bug #3497; infantry stamina limits can no longer be bypassed by holding hotkey C
- Fixed bug #3499; neutral parties can no longer see other parties' vehicles in the Planning Phase's 3D
 preview; only own and allied units will be shown during that time; this does not apply to UAV paths, they
 will always show "the truth"
- Fixed bug #3503; removed the discrepancy in the displayed dimensions of an artillery target area when planning the call for fire/waiting for splash, during the impact, and after the mission has been completed
- Fixed bug #3504; The 'condition test time' is now being reset if an "in-progress saved" scenario is being edited (and saved) in the Mission Editor
 - Note that under these circumstances the 'mission time' is being reset to 0. Fixed bug #3505; VBIEDs will now visibly explode on client machines
- Fixed bug #3513; the M1A2SEP will no longer appear to calculate firing solutions beyond 5000m range
- Fixed bug #3514; the **Give to...** command will now also work on client machines
- Fixed bug #3515; the HTML reports will now correctly list CO and XO callsigns
- Fixed bug #3529; Host-controlled technical trucks with ZU-23/2 will now have the gun correctly oriented to the rear
- Fixed bug #3536; it is no longer possible to accidentally "click through" the black chat line and message box to activate an underlying button in the 3D interior of a vehicle
- Fixed bug #3545; the countdown timers of on-map artillery units' fire missions are now listed in the Support drop-down menu
- Fixed bug #3549; mouse vector preferences are now properly stored in the Options.dat file
- Fixed bug #3557; when forced to abandon an (immobilized) vehicle in a network session, the player following the vehicle's troops will no longer continue to hear APC related looping sounds
- Fixed bug #3558; in network sessions, when starting in the vehicle commander's position the player will
 no longer be buttoned up but with binocular view magnification and reticule
- Fixed bug #3562; in network sessions ISO containers will no longer rapidly change their color when being pushed
- Fixed bug #3568; UAVs and helicopters will now maintain stabilized view mode while flying over forests
- Fixed bug #3575; motorcycle drivers will now adopt proper lighting settings at night
- Fixed bug #3576; the delay time for artillery units to repeat a fire mission is now extended 22 seconds



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- Fixed bug #3579; The Online Join Wizard will now show the player's party name immediately after their player name, like so: 'John, [Blue], HQ 1/2/3'.
 - Note that the player is still required to click on a unit (he can only occupy the observer's position anyway, so there is no 'risk' in him doing that)
- Fixed bug #3581; with this change printing while a mission is being executed will only work if the scenario is paused. This extends to all print functions (ie briefing, reports etc). One consequence of this change is that, under some circumstances, the **File** toolbar menu might be without any entries, in which case the menu entry will be grayed out (like happens with other menus, eg the **Support** menu..)
- Fixed bug #3586; the crew of the 1.2T TECHNICAL-T will no longer have a squad MG if no "Armed, if..."
 condition has been set
- Fixed bug #3587; "Armed, if..." and "Discard weapon, if..." changes are now events in the AAR
- Fixed bug #3588;
- Fixed bug #3591; automatic pathfinding will now ignore assault bridges that are carried by an AVLB
- Fixed bug #3592; improved treatment of "tiny" Source and Drain regions
 One of the conditions of the 'source/drain' feature is that SB Pro will only release actors from the pool
 through the Source if the desired coordinate of the route end within the Drain region is not blocked by an
 actor (like a tank parking in the same spot that the civilian unit selected as its target).
 With very small drain regions this could have led to a noticeable blockade of the source
- Fixed bug #3593; fire team leaders will now immediately return to their ride when given the mount command, even if the player is in the external observer's position (previously they seemed to be too embarrassed to do it on camera)
- Fixed bug #3595; corrected the East/West orientation of vehicles displayed in the M1A2 SEP commander's tactical panel
- Fixed bug #3608; while 'map' damage occurs, the current time will be shown under the mission time display in the upper left corner of the screen
- Fixed bug #3612; rocket artillery fire missions will now properly terminate after one salvo even if the unit has its ammo count set to "unlimited" (not recommended to begin with, but...)
- Fixed bug #3615
- Fixed bug #3616; for scenarios that were saved "in-progress" the mission time count is set to zero Clarification: If an 'in-progress' scenario is opened in the Mission Editor
 - the mission time will be reset to 0
 - the mission start time will be set to the in-game time when the scenario was saved conditions/events/scores that use 'mission time' will be adapted to account for the change in the mission time.
 - Eg if there was a condition that includes a 'if missiontime > 5:00' subcondition and the scenario was saved at mission time 3:30, then the condition will be automatically changed to state 'if missiontime > 1:30'.
 - 'incremental time' subconditions will be not be changed, but internal timekeeping is updated so that any conditions should trigger correctly
 - the 'h-hour' time will not be changed
 - weather control points are adapted ('past ones' will be deleted and a new initial weather condition will be calculated)

These changes will not be automatically saved; the MISSION EDITOR will however show the usual 'scenario has changed' indication.

- Fixed bug #3623; the M1A2 SEP battlesight will now work as intended
- Fixed bug #3631; mineplows will no longer stop clearing mines after being lifted for the first time
- Fixed bug #3632;
- Fixed bug #3635;



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- Fixed bug #3636; when replacing a scenario's map in the Mission Editor the map selection frame will now default to the previous map dimensions
- Fixed bug #3646 (duplicate of #3503; see there)
- Fixed bug #3650 (see also #3652); vehicles will now observe the maximum effective range of each ammunition type.

With this change combat vehicles will

- only shoot if the target is in range of their current ammunition (ballistic computer limitations are also observed, as well as the practical limits of the ammunition (such as dictated by tracer burnout range or dispersion) and
- 2) actually drive up (and actually speed up slightly) until they're in range to engage a target instead of stopping right away
- Fixed bug #3651; multi-select commands are now consistent in the MAP and in the Mission Editors. Hold
 down Shift and click to select multiple items, or to unselect one out of a group
- Fixed bug #3652 (this also fixes bug #3421; see also #3650); vehicles will now observe the maximum effective range of each ammunition type when advancing on an Engage route.
- Fixed bug #3653; HE grenades fired from combat vehicle smoke dischargers such as the LEOPARD 2 or M1 ABRAMS will no longer explode harmlessly too high and too far away from the firing tank. Instead they now have the proper range of approximately 50m
- Fixed bug #3661; when entering a building, a Lemur team's weapon no longer turns invisible
- Fixed bug #3662
- Fixed bug #3665; dust in Winter themed scenarios will now assume a whitish grey color
- Fixed bug #3673; artillery observers will now properly adopt a suitable posture to maintain observation while inside of buildings

3.011 (previous official release)