



DI-Guy 13.4 Release Notes

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Systems Supported

Table 1 lists the platforms currently supported by MAK DI-Guy 13.4. Application code must be built with the indicated compilers in order to link to DI-Guy libraries.

Table 1: Platforms supported

Platform	Compiler
Red Hat Enterprise Linux Workstation 7.0	Default compiler (64-bit)
PC with Windows 10	Microsoft Visual C + + 14.0 (64 bit)

The VC 14 build is binary compatible with all MAK VC 15 products.

Renderer Support

DI-Guy 13.4 supports the following renderers:

- ♦ Windows 64 bit: OpenGL, OpenGL Graphics API, OSG Graphics API.
- ♦ Reference implementations: DX9, DX11, Unity.
- ♦ Linux: OpenGL, OpenGL Graphics API, OSG.

License Manager

To run DI-Guy, you must install license management software. DI-Guy 13.4 uses FLEXlm 11.13.0.2. If you are upgrading from a version of DI-Guy that used an older version of FLEXlm, you must upgrade your license management files. You do not need a new license. Licenses are forward compatible.

The License Manager files are not part of the DI-Guy installer. You can download them at:

- ♦ Windows: <http://ftp.mak.com/out/MAKLicenseManager-win64-setup.exe>
- ♦ Linux: <http://ftp.mak.com/out/MAKLicenseManager-linux64-setup.tar.gz>

License manager support is available at:

<http://www.mak.com/support/license-support.html>

Network Compatibility

HLA only

DI-Guy 13.4 was built against VR-Link 5.4.1 and is compliant with:

- ♦ RPR-FOM 1.0 and 2.0.
- ♦ MAK RTI 4.1 or later.

DIS only

DI-Guy 13.4 supports DIS 4, 5, 6, and 7.

RTI Support

We recommend using the latest version of the MAK RTI. However, DI-Guy should work with other RTIs that conform to the HLA 1.3 specification, the IEEE 1516 SISO DLC API or HLA Evolved and are built with the same compiler as DI-Guy.

When using the MAK RTI, remember to make sure that DI-Guy can find your FED file, and optional *rid.mtl* file, by either putting them in the directory from which you are running, or by setting the environment variable to the directory that contains them.

FOM Support

DI-Guy 13.4 has built-in support for RPR FOM versions 0.5, 0.7, 0.8, 1.0, and 2.0. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, DI-Guy 13.4 uses RPR FOM 2.0. It is recommended that you use the DI-Guy FOM Extensions. DI-Guy includes two custom FOMs, one for HLA 1.3 and HLA 1516, and one for HLA Evolved.

New Features and Updates

DI-Guy 13.4 has the following updated features:

- ♦ Upgraded to newer versions of Qt, as follows:
 - Qt 5.10.1 - VC 14.
 - Qt 5.6.3 - Red Hat 7.
- ♦ Memory and performance improvements to the instancing system and per-character memory.
- ♦ Improved animation system performance on complex blend trees.
- ♦ Added support for asynchronous texture loading to retained mode renderers. See `diguyApp::run_background_load_update()`.
- ♦ OSG Examples now demonstrate asynchronous texture loading logic.
- ♦ Added support for Microsoft Concurrency Visualizer markers and spans. See `diguyApp::set_enable_concurrency_visualizer_markers()`.

- ♦ IK link and connection points can now be used to define both target points and the IK chain endpoint. IK solver looks for target points “l_grip_1” and “l_grip_2”, and IK endpoint “l_palm”. If found, these links override offsets defined in Weapon Supplemental Data.
- ♦ The new diguyCharacter callback (CALLBACK_ID_CURRENT_ARC_CHANGED) can be used to listen for character motion arc changes.
- ♦ The Action PDU now includes an optional offset field and a “use action positioning” flag. These can be used to specify a position correction (offset), and whether the character should be allowed to move from their starting position when transitioning to the given action.
- ♦ Motion changes and improvements:
 - Character motions are now loaded as needed instead of being loaded when a character is initialized, which allows for faster initial character creation.
 - Improved collision avoidance logic for crowds.
 - Improved motions and transitions for getting into and out of vehicles.
 - Added standing injured head.
 - Improved horse and rider motions.
- ♦ Added item/weapons:
 - Binoculars.
 - FAMAS rifle.
 - MPT-76 rifle.
 - M17 pistol ([Figure 1](#)), replacing the M9 as a standard.
- ♦ Added new soldier models:
 - Fighter pilot.
 - Paratrooper.
 - FELIN (France).
 - Countries: Canada, Germany, India, Israel, South Korea, North Korea, Pakistan, Qatar, Saudi Arabia, Singapore, and Turkey. For examples, please see [Figure 2](#), [Figure 3](#), and [Figure 4](#).
- ♦ Made other improvements to the appearance of humans, vehicles, and weapons.

API Changes

- ♦ BDI_DLL definition no longer needs required to link against the API.
- ♦ Added diguyCharacter::force_action_with_offset, which behaves like force_action but allows an additional offset to be applied to the character’s position.
- ♦ Added a new lookup method for transition information: diguyScenario::get_character_type_transition_info. Use this to look up the motion used to transition between two actions for a given character type. The details on the transition are returned in the diguyTransitionInfo struct.
- ♦ Updated Graphics API to work with OSG 3.6.3.

New Content

This section illustrates some of the new content in DI-Guy.



Figure 1. M17 Sig Sauer



Figure 2. Soldier models for Israel and North Korea



Figure 3. Soldier models for Saudi Arabia, Pakistan, and Qatar



Figure 4. Soldier models for India

Documentation Updates

Documentation has been updated for this release.

Bug Fixes

This release fixes the following problems:

- Resolved minor UI issues with DI-Guy Scenario. 51481
- Fixed issue with Time Control Dialog, where changes wouldn't take effect immediately. 53772
- HLA Connections can now specify RPR FOM Version instead of relying on defaults. 58297
- Resolved issue where the arm_r_3s_you_know5 gesture affected the left arm instead of the right. 60644
- Fixed intermittent crash when deleting multiple published characters from a crowd. 62065
- Fixed crash when using head/tail lights on DI-Guy vehicles. 62978
- Fixed crash in navmesh processing on real-time systems. 65536
- Fixed issue where paused characters would skip the rest of the motion if they were paused and then unpaused while performing an action. 65751
- Fixed foot sliding issue with Javelin character. 65761
- Fixed mouse input issue with ECOSim lua scripts. 65762
- Improved appearance of police uniform. 65763
- Fixed math issue in PBR shaders. 65764
- Fixed issue where embarked entities/particle systems would stop updating if parent was culled. 65853