**BEAM Installation Guide**

Installing the BEAM tool simply requires users to run the install.bat file located in the BEAM project folder.

This script is a batch file that will install the dependencies for the BEAM tool automatically, creating an environment that can be used to run the tool. This environment contains the Python packages and dependencies needed to run the beam test program.

To use this script, you need to have the following:

* A Windows operating system (64-bit)
* An NVIDIA graphics card with up-to-date drivers
* PowerShell installed and enabled (should be installed by default on Windows systems)
* An internet connection
* The default folder structure for the BEAM tool

The script will perform the following steps:

1. Check if Mamba is already installed on your system. Mamba is a package manager for Python. If Mamba is found, it will skip to step 4.
2. Download the Mambaforge installer from GitHub using PowerShell. Mambaforge is a distribution of Miniforge that includes Mamba. The installer will be saved as a temporary file in the %TEMP% directory with a random name.
3. Run the Mambaforge installer in silent mode with the following options:
   * InstallationType=JustMe: Install Mambaforge only for the current user
   * S: Suppress any user interface or prompts
   * D: Specify the installation directory as %USERPROFILE%\mambaforge
   * After the installation, delete the temporary installer file and check if the installation directory exists. If not, exit with an error message.
4. Initialize Mamba by using the mamba init command. This will modify your PATH environment variable and activate Mamba by default in your shell sessions. If this fails, exit with an error message.
5. Create the beam environment. This will install all the packages and dependencies listed in the file into a new environment named beam. If this fails, exit with an error message.
6. Exit with a success message.

To run this script, you can either double-click on it or open a command prompt and type its name. You may need to run it as an administrator if you encounter any permission issues.

The installation will take some time, as the dependencies are more than 3GB in size.

After running this script, the BEAM tool can be run by following the steps in the “Test Guide”. The start\_interface\_browser.bat file will activate the beam environment and launch the tool.

If firewall or network issues prevent downloading of the dependencies through the installer, the packaged dependencies are available here: [INSERT LINK]. These can be activated by running the offline\_installer.bat file.