



# Startup Guide

NBS Presentation

v 1.1.15

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## Tutorial

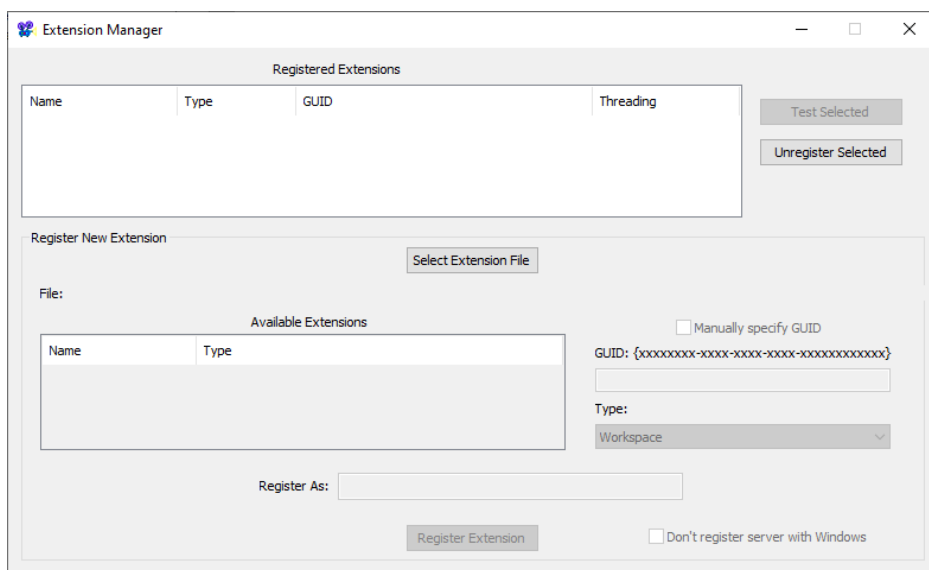
This is a manual on how to use an EyeLogic eye tracking device together with NBS Presentation.

The EyeLogic NBS plugin provides an interface to NBS Presentation. In order to use it, this interface must be loaded as an extension into NBS Presentation.

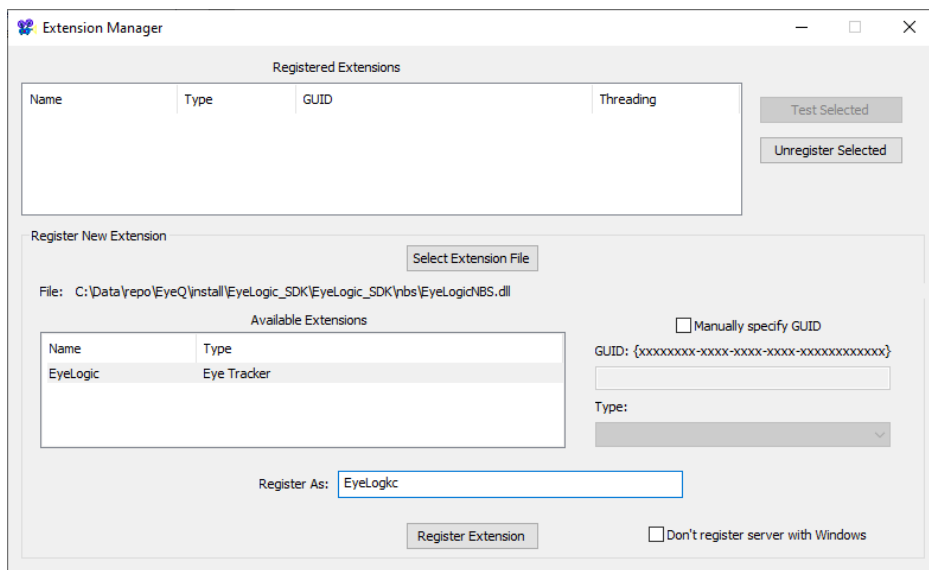
### Register EyeLogic in NBS Presentation

In order to register the EyeLogic extension, please follow these steps:

1. Download and extract the EyeLogic NBS plugin to a local folder. In the following, this folder is denoted as <elnbs>.
2. Start NBS Presentation
3. Open the extension manager by clicking Tools -> Extension Manager

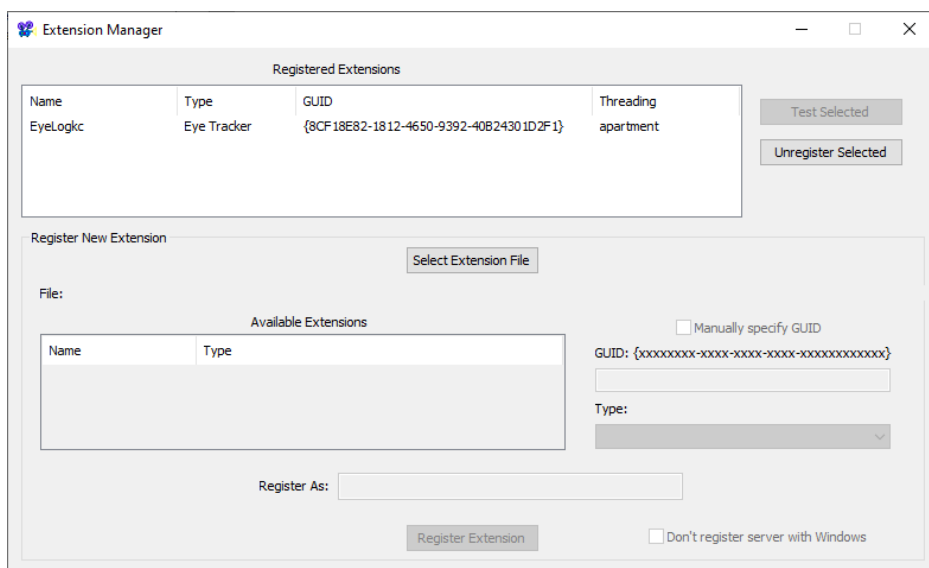


4. Click "Select Extension File"
5. In the file dialog, navigate to the directory <elnbs>\EyeLogic\\_NBS\bin and select the file EyeLogicNBS.dll
6. In the extension manager, from "Available extensions", select "EyeLogic"
7. In "Register As:", enter any unique name (e.g. EyeLogic)



8. Click "Register Extension"

9. After registration, the registration manager should list EyeLogic in the list of extensions:



## Using NBS Presentation

NBS Presentation Example01, which is included in the archive of the EyeLogic NBS plugin, contains a .sce, a .pcl file and several images for a few commonly used resolutions. Before the script can be started, an experiment file needs to be created. This file must contain the definition of the display device as well as the corresponding paths locating the images. If the defined resolution is different from the resolution of the images, distortion of the gaze data may occur. Therefore, we recommend to setup and use the same resolution, which needs to be defined in the .sce file as well. Once the display device is defined, start the EyeLogic Server and go to the

Settings tab to check whether the EyeLogic Server is set to use the same display as previously determined in NBS Presentation's experiment file or set to current settings. Using the example experiment makes it necessary to add one additional response button, which can be defined in the Setting tab as well.

Example01 is a pretty straight forward script to get started. It shows a simple way to access the gaze position data. However, before starting the script, the EyeLogic Server needs to be fully initialized - i.e. it must indicate the presence of a detected hardware device and tracking must be enabled. Additionally, a calibration must to be successfully completed in order to ensure the gaze data can be properly calculated. Due to the handling of different windows with increasing priority, the NBS display and the EyeLogic calibration visualization may interfere with each other, so that the calibration screen may be forced into the background and might therefore be hidden from the participant. We recommend to calibrate the eye tracker from within the EyeLogic Server for each individual participant before starting any NBS Presentation experiments.

As a gentle reminder, when interpreting the data, it may be helpful to keep in mind, that NBS Presentation places the origin of the gaze point coordinate system at the center of the screen, while native EyeLogic SDK examples (C++ / C) place the origin at the top left corner of the screen. The pupil diameter which is accessible via the the start\_data function, is calculated in mm. To access this channel, it needs to be started explicitly. See the NBS Presentaion manual to see how to manage the eye tracker using the EyeTracker2Impl. Fixation data, supported by NBS Presentation, is not implemented so far, but will be added in future relases.

## About

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