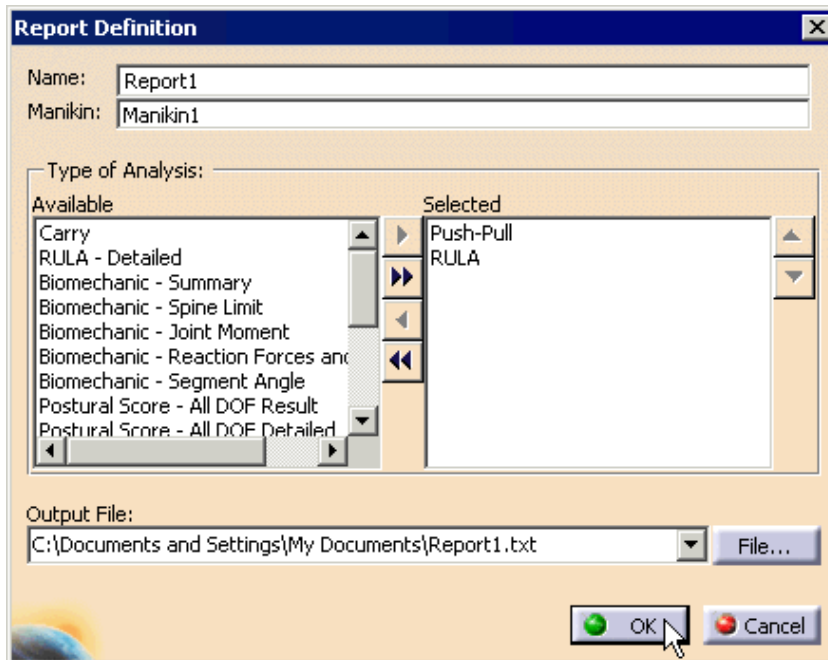# Human Builder Report Procedures

This functionality produces comprehensive report files from specifications. This gathers the results of the various analyses found in the Human workbenches including an analysis of the manikin's vision.

1. In the Human Builder workbench select the **Inserts a new Report** command that is located in the **Insert** menu bar or in the **Manikin Tools** toolbar.

2. Selecting the **Inserts a new Report** command, you are then prompted to select a manikin the new object will belong to. Once the manikin is selected, the **Report Definition** panel appears:

3. You can choose any combination of analyses to populate the report, by toggling them from the **Available** column to the **Selected** column. The Output File field contains a default path, pointing to the V5 temporary directory (CATTemp), but you can change the output file of the report by clicking the **File...** button. This field also contains a history of the last few report files used (hence the combo). You can select among the following formats: **.html**, **.txt**, or **.xml**.

    This default path can be changed in the **Tools** > **Options** > **Human Builder** > **General** tab.
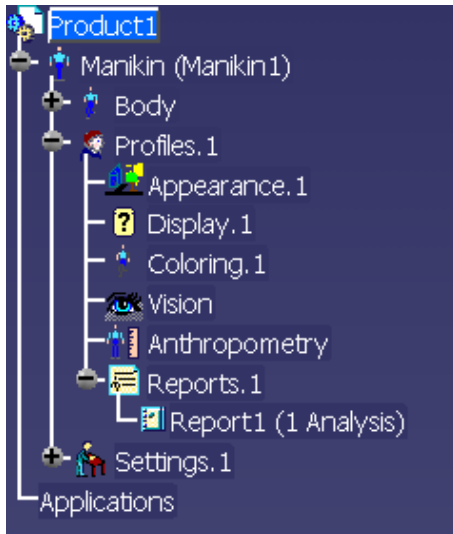
    Each report object must be associated to a specific log file; however, it is permitted to assign two or several different report objects to the same log file.

4. You will be able to choose from the following list of analyses, on any report object:
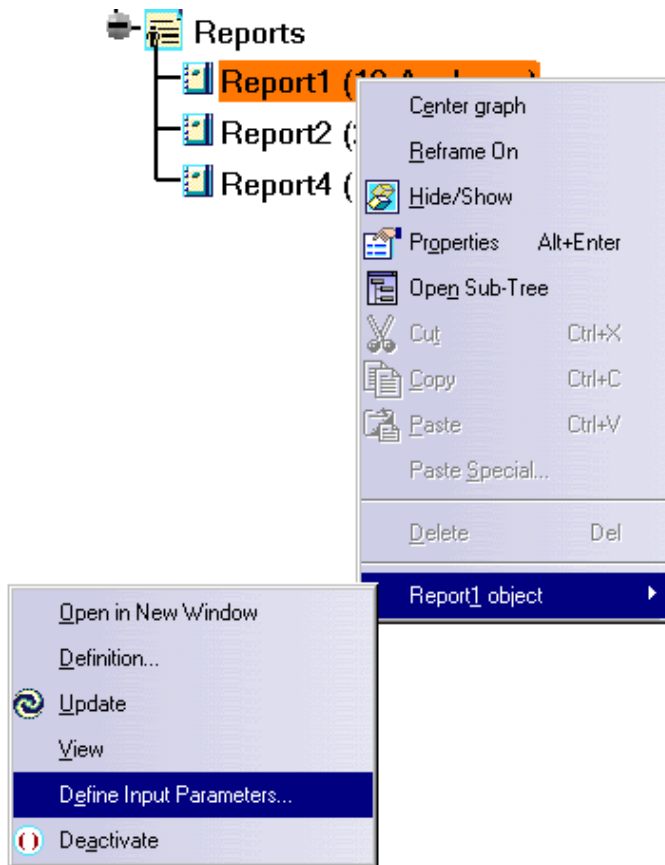
    - Push/Pull analysis
    - Carry analysis
    - RULA analysis
    - Detailed RULA analysis
    - Biomechanical - Summary
    - Biomechanical - Spine Limit
    - Biomechanical - Joint Movement
    - Biomechanical - Reaction Forces and Moment
    - Biomechanical - Segment Angle
    - Postural Score analysis - All DOF Result
    - Postural Score analysis - All DOF Detailed
    - Detailed Postural Score analysis - DOF1
    - Detailed Postural Score analysis - DOF2
    - Detailed Postural Score analysis - DOF3
    - Constraint Results
    - Vision Analysis
    - Walk Distance-Single Walk

○ Walk Distance - Cumulative

5. Any combination of analyses can be activated, and each report object must point to a valid output file. A specific analysis in the above list will be selectable for activation only if the proper product license check succeeds for this analysis. For instance, the **Push/Pull** and **RULA** analyses will be selectable only if the **Human Activity Analysis** product is installed.

6. While editing the report properties, clicking another manikin will switch that report object to the new manikin. The name of the manikin associated to the report object appears in the Manikin field. Also, a default name (i.e. Report1 Report 2…) is given to the report object. Change the name before you select **OK**.

7. When completed, the new report object appears under the selected manikin, in the specification tree:

8. Right-clicking on the **Reports.1** shows the options available.

The Define Input Parameters dialog box contains all the explicit parameters for each analysis, organized in dialog's tab pages. The activate/deactivate commands can be used to activate/deactivate a given report object. Inactive report objects will NOT produce an entry in their respective log file when the global **Update**
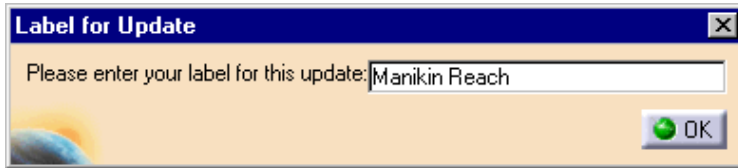
 is launched. The **Update** command in a report object's contextual menu can be used to force an active report object to update its log file, using the manikin's

current posture. It is this command which is actually called upon in the background on every active report object when the global Update command (from the workbench) is executed. You can also use the **Update** command on the contextual menu of the Reports node, to update all active reports of one manikin in one operation. The **Definition** command pops up the **Report Properties** panel, just as when double-clicking the object.
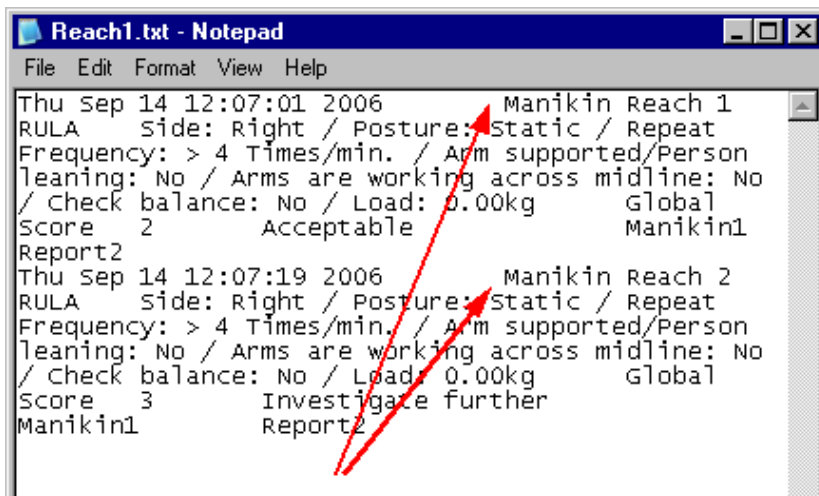
9. Descriptions can also be created for the vision, the anthropometry, or the posture of the manikin using the **Adds a description to a manikin object** command. Select the appropriate node in the specification tree (Manikin, Anthropometry, Vision, or Body) and the corresponding description will appear in the text field.

10. After configuring the report object for a specific manikin, the launch of the **Update** command in the **Human Builder** workbench. This will cause each active report object to update, and each object will send the results of the activated analyses into its respective log file. Please note that the dialog panels of the corresponding analyses do not need to be open for the report objects to work. That is, the relevant analyses are performed in the background, using the manikin's current posture, and no message panel pops up during the process.

11. If required to do repetitive positions, you are able to enter a custom label at updating by activating the **Enable custom label at update** in the **Tools > Options >** **Ergonomics > Human Builder> General** tab.

Here is a example of a RULA Report.

12. Also note that the **Auto Update** feature will not interfere with the log production. That is, even if the constraint Update mode is set to **Automatic** (through the **Tools > Options** panel of **Human Builder**), select **Update** in order to get the log updated.

The **Update** will therefore have two distinct functions: update the constraints of each manikin in the current document (if any), its current function, and then, perform an update of the log for each manikin of the current document that has at least one report object activated. Each click on the Update augments a given log file, without overwriting the previous information appearing in that file. At any given time, you can view a log file by other means than V5 (i.e. Notepad, Internet Explorer, Microsoft Office) to verify its contents. If an activated analysis points to a target log file that does not exist, then that log file is created by its report object and populated on the next Update. If, at that time, for any reason, the log file, cannot be written into (because of bad file access permissions for example), then the appropriate error panel informs you of the situation.

For Reporting Capabilities see:

Lift-Lower Analysis

Push-Pull Analysis

Carry Analysis

Log File txt Format

Log File HTML Format

RULA analysis in XML Format

Vision analysis