AS4 to AS6 Conversion Tool - User Guide

1. Introduction

This tool is designed to assist in the migration of B&R Automation Studio 4 (AS4) projects to Automation Studio 6 (AS6). It analyzes project files, identifies deprecated libraries and functions, and suggests replacements compatible with AS6.

2. Launching the Webserver

The tool runs as a local web application.

Prerequisites

- Python installed on your Windows machine.
- PowerShell or Command Prompt.

Steps to Launch

1. Open **PowerShell**.
2. Navigate to the project directory:

```
cd c:\Projects\GithibCopilotPlayground
```

3. Start the Python HTTP server:

```
python -m http.server 8000
```

4. Open your web browser and navigate to: http://localhost:8000/as4-to-as6-converter.html

3. Functionality Overview

Key Features

- **Structure Analysis**: Parses folder structures to understand the AS4 project layout.
- **Deprecation Scanning**: Identifies obsolete libraries (e.g., `MpCom`, `MpWebXs`) and suggests AS6 alternatives.
- **Code Conversion**: Automatically updates syntax for renamed functions or types (e.g., `OpcUA` -> `OpcUaCs`).
- **Report Generation**: Exports a summary of changes and remaining issues.

4. User Interface

The application is divided into four main tabs:

4.1 Project Selection

This is the starting point.

- **Upload Area**: Drag & drop your project folder or use the **"Select Project Folder"** button.
- **Project Summary**: Displays a count of ST files, Packages, Libraries, and Hardware configurations found.
- **Action**: Click **"Scan for Deprecations"** to proceed.

Project Selection Screen *(The Project Selection tab showing file upload and summary)*

4.2 Analysis Results

Displays the findings from the scan.

- **Deprecated Libraries**: Lists libraries that need to be replaced.
- **Function Calls**: Shows specific code lines that require modification.
- **Issues**: Highlights potential problems like version mismatches.

4.3 Preview Changes

Allows you to review the modifications before applying them.

- **Diff View**: Shows "Before" and "After" views of your code files.
- **Apply**: Buttons to confirm file conversions.

4.4 Report

Generates a final summary.

- **Export**: capable of saving the migration log for documentation.

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5. Troubleshooting

- **"File not found"**: Ensure you have selected the root folder of the AS4 project.
- **Server not responding**: Check if the PowerShell window running Python is still open.
- **Version Errors**: If you see errors like `MpServer 6.5.0 not valid`, ensure the `as6-libraries-index.json` is correctly configured for version `6.2.0`.