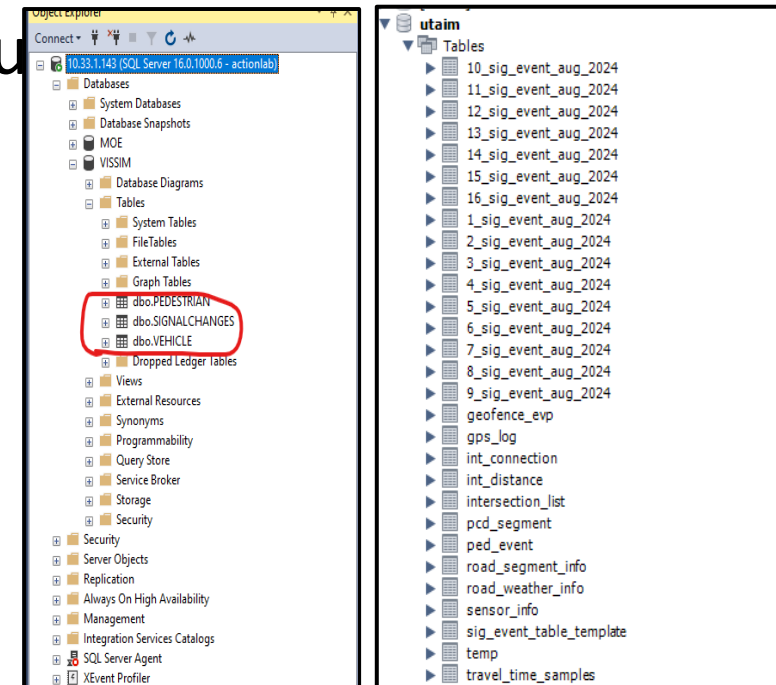


P2: ATSPM-In-the-Loop Simulation software tutorial

Instructor materials

Software 1: Data parser from VISSIM output to UDOT-ATSPM Database

- Pre-requisite:
 - Set up a Utah-DOT ATSPM
 - Set up the database for VISSIM simulation output
 - Set up the MySQL for UTA-In-Motion database
- Run VISSIM software and get the simulation output
- Reference:
 - Final report (download link to be determined)



Software Interface

The screenshot displays the 'VISSIM Simulated Data Parser for TxDOT ATSPM Systems' interface, divided into three main steps:

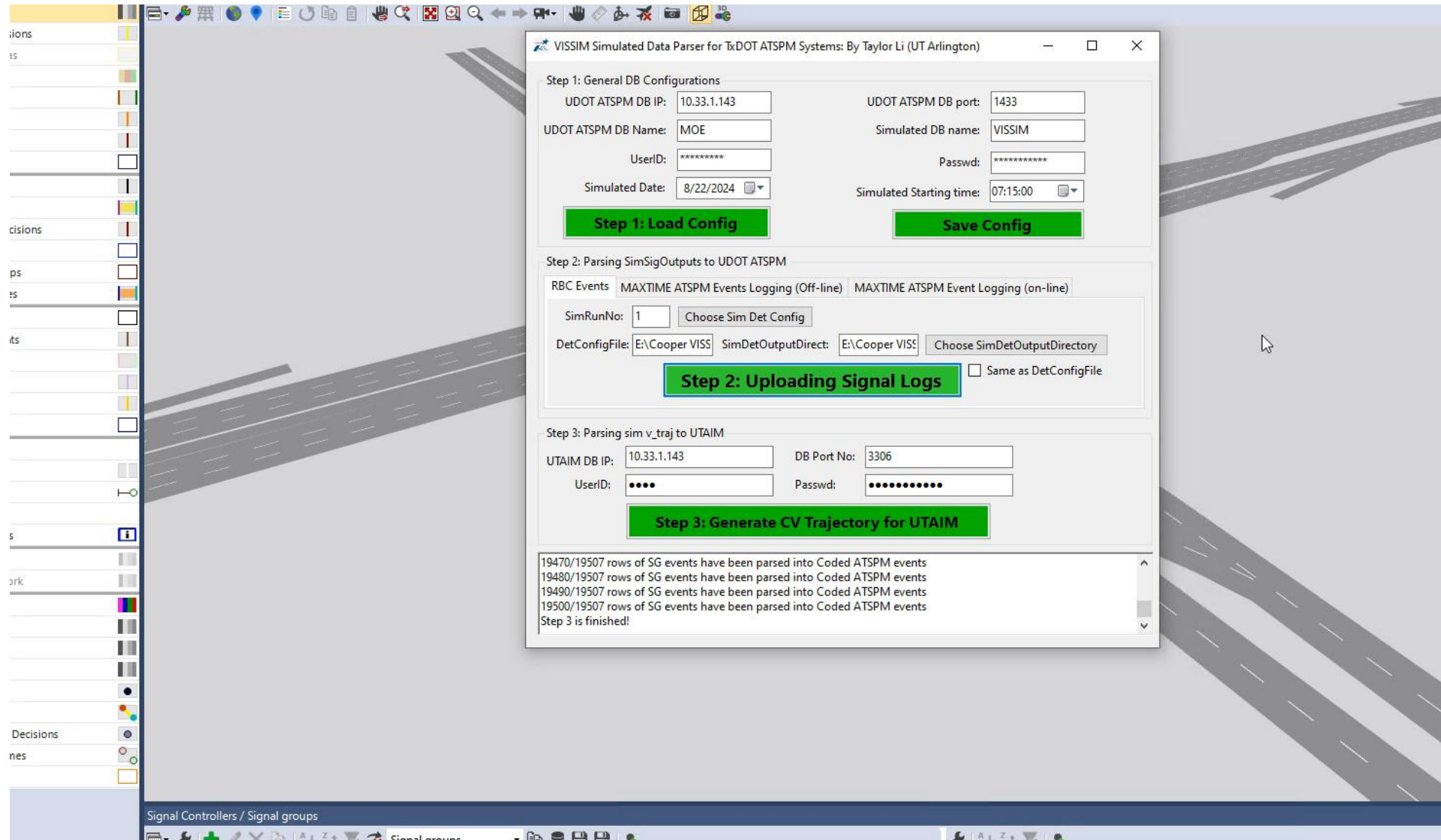
- Step 1: General DB Configurations** (highlighted with a red box and labeled '1'): Includes fields for UDOT ATSPM DB IP (10.33.1.143), UDOT ATSPM DB Name (MOE), UserID (masked), Simulated Date (8/22/2024), UDOT ATSPM DB port (1433), Simulated DB name (VISSIM), Password (masked), and Simulated Starting time (07:15:00). Buttons for 'Step 1: Load Config' and 'Save Config' are present.
- Step 2: Parsing SimSigOutputs to UDOT ATSPM** (highlighted with a red box and labeled '3'): Includes a 'SimRunNo' field (1), a 'Choose Sim Det Config' button, 'DetConfigFile' (E:\Cooper VISS), 'SimDetOutputDirect' (E:\Cooper VISS), and a 'Choose SimDetOutputDirectory' button. A 'Step 2: Uploading Signal Logs' button is also visible.
- Step 3: Parsing sim v_traj to UTAIM** (highlighted with a red box and labeled '4'): Includes fields for UTAIM DB IP (10.33.1.143), UTAIM DB Port (3306), UserID (masked), and Password (masked). A 'Step 3: Generate CV Trajectory for UTAIM' button is present.

A log window at the bottom (highlighted with a red box and labeled '5') shows the following output:

```
19470/19507 rows of SG events have been parsed into Coded ATSPM events
19480/19507 rows of SG events have been parsed into Coded ATSPM events
19490/19507 rows of SG events have been parsed into Coded ATSPM events
19500/19507 rows of SG events have been parsed into Coded ATSPM events
Step 3 is finished!
```

1. UDOT DB information
2. VISSIM DB information
3. Sim Output Configuration
4. UTA-In-Motion DB information
5. Logging information

Transfer VISSIM RBC signal/trajectory data into UDOT-ATSPM and UTA-In-Motion Database



Software 2: Transfer ATSPM data from UDOT-ATSPM to UTA-In-Motion

Special call: UDOT2UTA_ATSPM_DB_Makeup_Parser v1.1.1: ACTIOINLAB@UTA

UDOT->UTAIM DB Transmission is performed once per operation

UDOT SPM SQL SERVER (V4.2+)	UTA SPM MySQL DB (V1.1+)
IP address: 10.33.1.143	IP address: 10.33.1.143
Port: 1433	Port: 3306
Database Name: MIE	Database Name: utaim
UserID: *****	UserID: *****
Password: *****	Password: *****

ATSPM
Automated Traffic Signal Performance Measures

ACTION Laboratory
Department of Civil Engineering

One-time Makeup Data Transfer

Sig ID: checked for all intersection registered in UTAIM

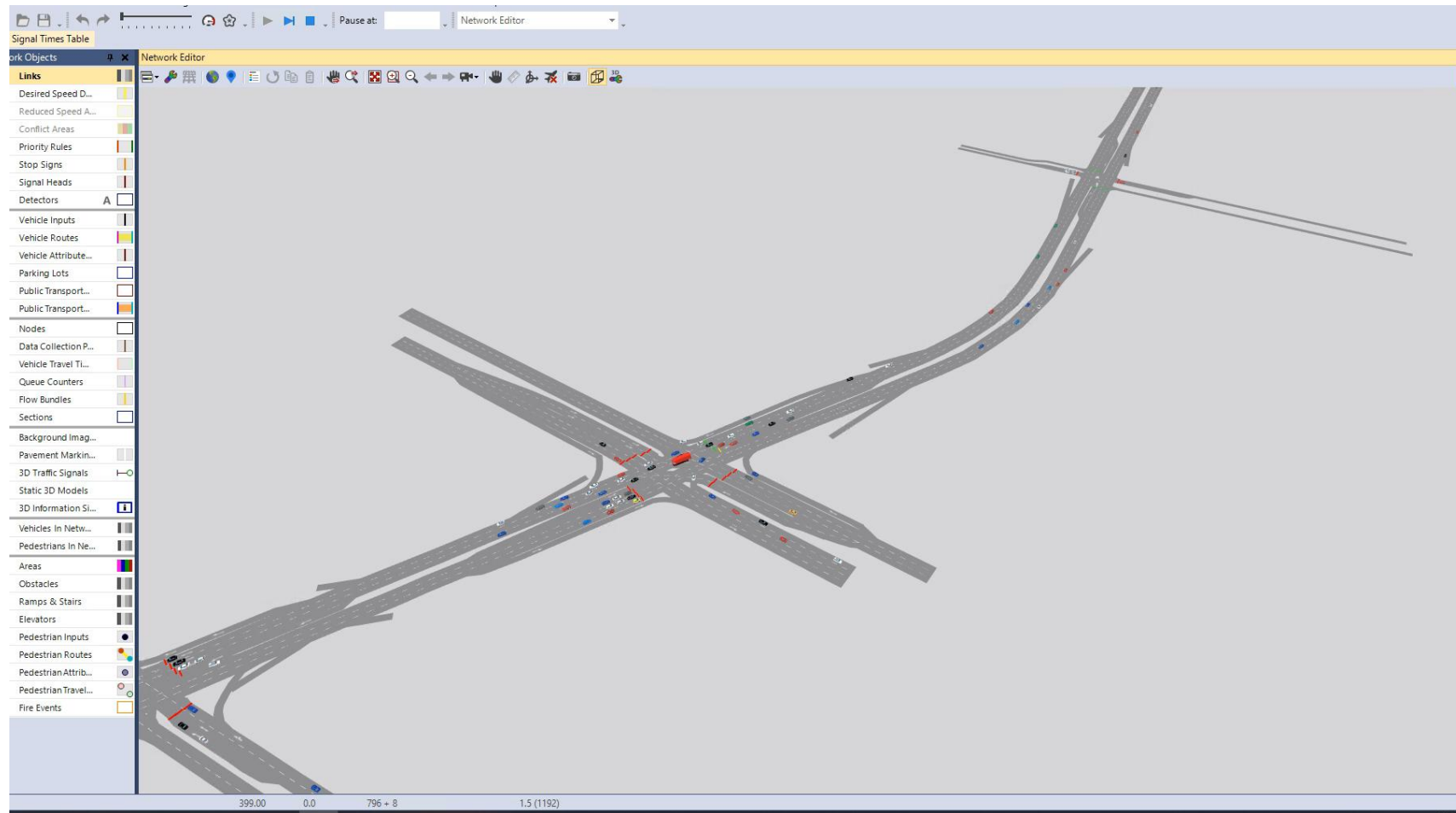
From time: 2023-05-20 00:00:00 To time: 2024-09-01 10:09:23

Load Parameter **Start Data Transfer** **Flush UTAIM DB**

```
A new data transfer started at 02-24-2024 10:10:49.4.  
1 k rows were processed, total rows is 544 k  
2 k rows were processed, total rows is 544 k  
3 k rows were processed, total rows is 544 k  
4 k rows were processed, total rows is 544 k  
5 k rows were processed, total rows is 544 k  
6 k rows were processed, total rows is 544 k  
7 k rows were processed, total rows is 544 k  
8 k rows were processed, total rows is 544 k  
9 k rows were processed, total rows is 544 k  
10 k rows were processed, total rows is 544 k  
11 k rows were processed, total rows is 544 k  
12 k rows were processed, total rows is 544 k  
13 k rows were processed, total rows is 544 k  
14 k rows were processed, total rows is 544 k  
15 k rows were processed, total rows is 544 k
```

1. UDOT-ATSPM DB Info
2. UTA-In-Motion DB Info
3. Sim Output Configuration
4. Logging information

Running Q-FREE SILS simulation and collect real-world traffic signal logs from MAXTIM emulators



Traffic Signal performance analysis

- Users can refer to the UDOT-ATSPM user manual and its community to generate various traffic signal performance measures.
- Users can also refer to the project final report to user UTA-In-Motion.