

Reliance Infrastructure Limited

RELGIS-External SCADA_ID's

Population Tool ver 1.00

Design Document

Design Document Version 1.00

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RELIANCE Energy
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REVISION HISTORY

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1	19 July 2010	1.00	Initial Draft prepared as per discussion with GIS Team	Mr. Vedant Goyal	Initial Draft.

Table of Contents

1. Design	4
1.1. Introduction	4
1.2. System Structural Design	4
1.3. Behavioral Design	4
2. Architecture	5
2.1. System Architecture	5
2.2. Components	5
2.2.1. Presentation/UI Components	5
2.2.2. Data Storage Components	6
2.3. Deployment	6
3. Source Code Organization	8
3.1. Overview	8
3.2. Key Directories and Files in Developer Working Copies	8
4. User Interface	9
4.1. Overview	9
4.2. Interface Description	9

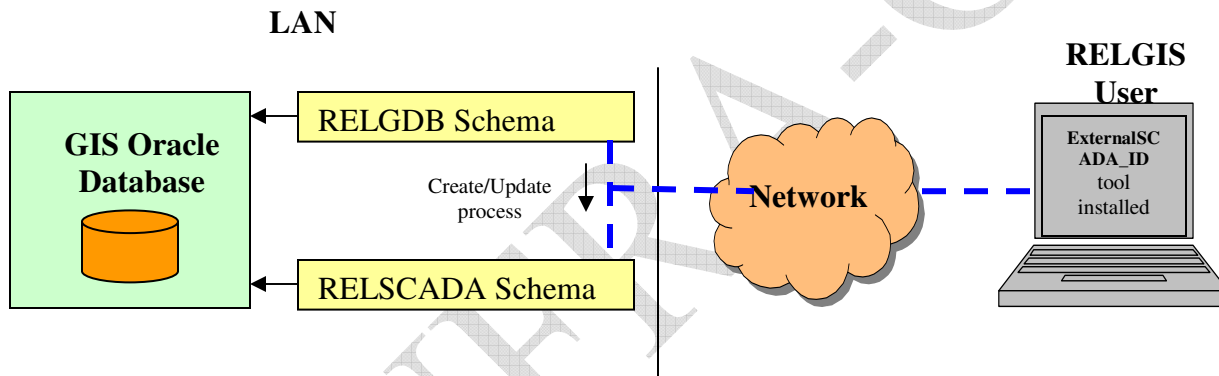
1. Design

1.1. Introduction

The Design Document serves as the business and technical specifications for the design and development of the windows based *External SCADA_ID's Population Tool*. This document contains the relevant information needed to develop and deliver the interface successfully.

This design approach describes a method by which *External SCADA_ID's Population* can be used.

1.2. System Structural Design



1.3. Behavioral Design

When the tool is run, the user would be presented with a GUI. The GUI has two important sub-parts

1. Oracle Connection
2. Geo-database Connection

User need to input valid connection parameters as demanded. The Oracle Connection would be used to populate External SCADA_ID's within the specified schema whereas Geo-database Connection details would be used to extract external SCADA_ID's of different switchgears (circuit breaker, switches etc.)

2. Architecture

2.1. System Architecture

Software architecture style for this tool is windows based database type application.

This section describes the *RELGIS - External SCADA_ID's Population Tool's* graphical user interface, its system dependencies, requirements and configurations.

RELGIS - External SCADA_ID's Population Tool' is a 1 step process, which works in three modules i.e. connecting to database where External SCADA_ID's are to be populated; connecting to database from where External SCADA_ID's are to be extracted; Create/modify respective required tables; update these tables and generate summary report.

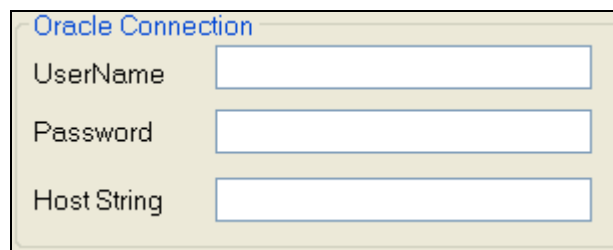
2.2. Components

2.2.1. Presentation/UI Components

RELGIS-Cable section and Pillar wise Load calculation Toolbar consists of two group boxes and one button command.

The user has to input the textboxes mandatorily before successful execution of the tool

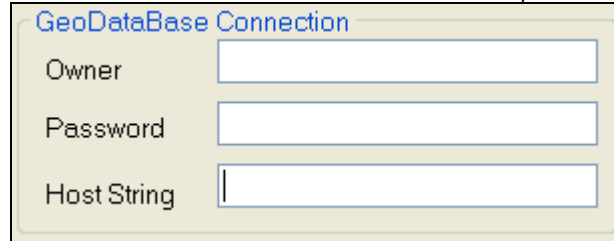
- Oracle Connection Group Box



The image shows a screenshot of a dialog box titled "Oracle Connection". Inside the dialog, there are three text input fields arranged vertically. The first field is labeled "UserName", the second is labeled "Password", and the third is labeled "Host String". Each field has a corresponding text label to its left.

This connection strings details are used towards populating External SCADA_ID's in the given schema.

- GeoDatabase Connection



GeoDataBase Connection

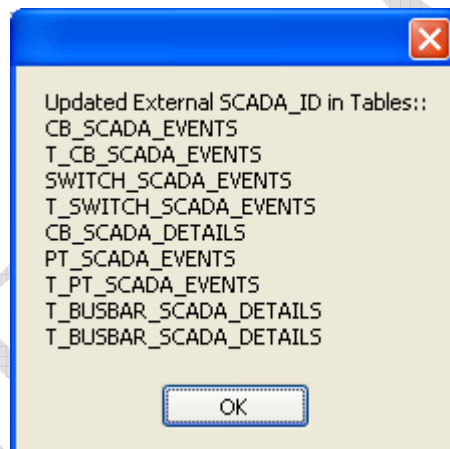
Owner

Password


Host String

This connection strings details are used to extract all the features containing a valid External SCADA_ID's.

The user will input a valid connection strings and click "Connect". If the connection is successful the tool would perform its task. At the end of successful procedure completion a message box would appear giving a summary report. The summary would contain details of tables created/updated.



2.2.2. Data Storage Components

Data Tables created & their schemas	 Table Created
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2.3. Deployment

The *RELGIS - External SCADA_ID's Population Tool* can be deployed on a machine which can connect to GIS oracle database.

RELGIS - External SCADA_ID's Population Tool is a windows based self executable application and hence does not requires installation.

RELGIS

3. Source Code Organization

3.1. Overview

The *RELGIS - External SCADA_ID's Population Tool* is a windows application developed in Visual Studio C# .NET 2005.

3.2. Key Directories and Files in Developer Working Copies

The folder “External_SCADA_ID” contains the source code. Latest version is External_SCADA_ID v1.2. The folder “ExternalSCADA_IDv1.2” within main folder contains document, source-code, and installer folders relevant to the given version

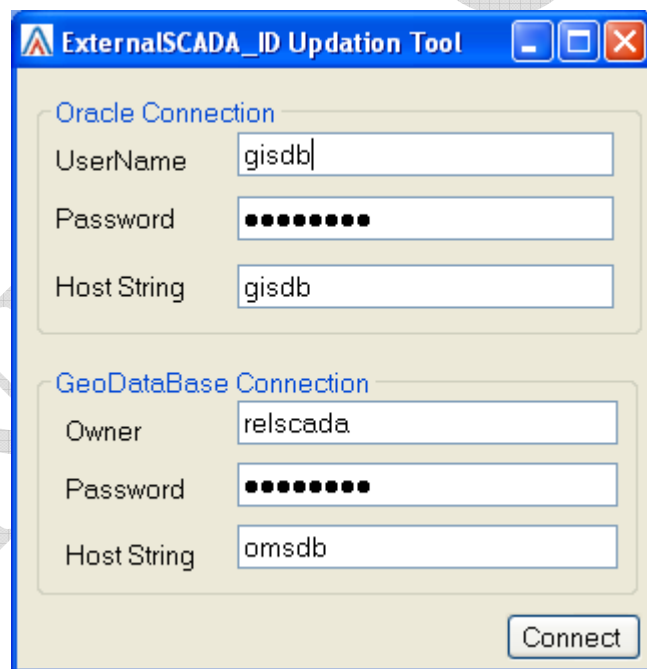
4. User Interface

4.1. Overview

This section describes the *RELGIS - External SCADA_ID's Population Tool's* User Interface.

4.2. Interface Description

The user will be required to input valid connection strings relevant to oracle database connection. After entering above mention details, External SCADA_ID's would be populated in respective tables in interested schema.



The screenshot shows a Windows-style application window titled "ExternalSCADA_ID Updation Tool". It contains two sections for database connection details:

- Oracle Connection:**
 - UserName: gisdb
 - Password: (masked with dots)
 - Host String: gisdb
- GeoDataBase Connection:**
 - Owner: relscada
 - Password: (masked with dots)
 - Host String: omsdb

A "Connect" button is located at the bottom right of the form.

Fig4.2: External SCADA_ID Population Tool with inputs