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SYSTEM/PROJECT/PRODUCT: STC UTC

Data Preparation Handbook

for an STC UTC System

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ISSUE STATE

Note :- Source of documents is shown under Type as below.

1=Paper, 2=VAX, 3=Microfilm, 4=CALTEXT Disc, 5=DECmate Disc,
6=Paper Insert, 7=MAC Disc, 8=LIFESPAN, 9=SUN, 10=Other - add note *.

The document comprises the following components :-

Current

Pages	Issue	Type	Part ID	File ID
All	30	10	666HD16940000	HD16940_V30.DOC

* Note : document stored under AutoManager Meridian

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1. INTRODUCTION

1.1 Purpose

This document describes how to use the data preparation facility of an STC Urban Traffic Control System (UTC), hereafter referred to as the System, to enter, change and process System data.

1.2 Scope

The document is written for day to day users of a System which is capable of running SCOOT Version 2.4 or later. Users of the handbook should have attended an STC Data Preparation training course.

This document contains example screens. These are intended to be examples only and are correct at the time of document issue.

1.3 Related documents

In the references below, the characters 'xxx' substitute for the 3 digit number which uniquely identifies a particular UTC System i.e. the customer variant for these documents.

1.3.1	666/UH/16940/000	Systems Requirement Specification for an STC UTC System
1.3.2	666/UH/16940/xxx	Customer Requirements Specification
1.3.3	666/HE/16940/000	System Handbook for an STC UTC System
1.3.4	666/HB/16940/000	Operators Handbook for an STC UTC System
1.3.5	666/HF/16940/000	SCOOT User Guide
1.3.6	666/HG/16940/000	System Management Handbook for an STC UTC System
1.3.7	666/HD/16940/000	Data Preparation Guide for an STC UTC System
1.3.8	666/HI/16940/000	Data File Format Guide for an STC UTC System
1.3.9	666/HB/16101/003	SCOOT V4.2 Traffic Handbook
1.3.10	666/KE/16066/000	UTC Glossary of terms
1.3.11	666/HT/16940/000	Timetable Preparation Handbook for an STC UTC System
1.3.12	666/HP/16940/000	Plan Preparation Handbook for an STC UTC System

1.4 Definitions

For all definitions and abbreviations used in this and related UTC documentation see reference 1.3.10.

1.5 Issue state and amendment

Issue 01.00	First Issue
Issue 02.00	Second Issue, 9th February 1993, DC 7576, add information about locations of plan and timetable files, update to reflect latest software (OMU, TC12, Tidal Flow, Multi-machine System, password and flashing amber/red support).
Issues 03.00 to 06.00	Not issued.
Issue 07	Updated, minor corrections fixed and Issue state now aligns with Software issue.
Issue 08.00	Update to reflect V8 software. Mainly remove plan prep and changes to remote request screens.
Issue 09.00	Not issued.
Issue 10.00	Revised and updated to reflect V10 software.
Issues 11.00 to 16.00	Not issued
Issue 17.00	Converted to Word format and updated to align with version 17 of the UTC System
Issues 18 to 20	Not issued
Issue 21	Updated to align with version 21.0 of the UTC System
Issue 22	Not issued
Issue 23	Updated to align with version 23 of the UTC System
Issue 24	Not issued
Issue 25	Not issued
Issue 26	Updated with version 26 of the UTC System
Issue 27	Not issued
Issue 28	Updated to include HTML DBAS
Issue 29	Not issued
Issue 30	Updated with new HTML forms for UTMC mark2. Correct numbering of figures in appendices.

2. INTRODUCTION TO DATA PREPARATION

2.1 General

A computer based UTC System needs to be configured to suit the network of roads, intersections, etc, which the System controls. The information which describes the road layouts, which are unique to any one System, is stored as data in a number of disc files which can be accessed at any time by the System. These files form a collection of related data, known as a "database", which describes the particular road system and associated equipment to the computer.

The compilation and amendment of the "database" is carried out using the Database Preparation program. This handbook is intended to describe how to use that program to enter data into the database and subsequently amend that data to take account of different road layouts, traffic management strategies, etc.

The Data Preparation Guide (Reference 1.3.7) has details of how to specify the data.

Separate Handbooks are provided for Timetable Preparation (Reference 1.3.11) and Plan Preparation (Reference 1.3.12).

2.2 Arrangement of the Handbook

The handbook is laid out in a way which follows the menu structure of the data preparation program. A section describes the error messages which may be produced during the processing of the data. The format of the lines of data which are produced by the listing option of the data preparation program is shown in the Data File Format Guide (Reference 1.3.8).

2.3 SCOOT Validation Data

The values of the various parameters which are determined during the SCOOT validation process are not entered in the data preparation process but are entered using the CHAN and RUBA commands. The SCOOT User Guide (Reference 1.3.5) and Operators Handbook (Reference 1.3.4) give more detail.

3. RUNNING THE FORMS BASED DATABASE PREPARATION PROGRAM.

3.1 Data Entry Sequence

The order in which data is entered in to the System and the way in which it is processed is important. The sequence shown below is that which should be followed if entering data for a completely new System. If amendments are being made to an existing System, the sequence should be entered at the appropriate point and then followed in the correct order.

- Add/Modify/Delete Computer
- Process Computer Data
- Add/Modify/Delete Sub Areas
- Add/Modify/Delete OTUs
- Add/Modify/Delete Junctions
- Add/Modify/Delete Pelicans
- Add/Modify/Delete all other types of UTC Equipment
- Process Data entered so far
- Add/Modify/Delete SCOOT Area Data
- Add/Modify/Delete SCOOT Regions
- Add/Modify/Delete remainder of SCOOT Data in the order:
 - Nodes
 - Stages
 - Links
 - SCOOT Link Stage Data
 - Detectors

Process Data entered so far

In order to minimise errors during the data preparation process and in the subsequent running of the UTC System it is recommended that you:

Enter the sequence of operations shown above at the appropriate point and then follow the sequence right through to the end without omitting any process operations.

Make sure that when any changes are made to the database they are reflected in the commands stored in the timetable files, reference 1.3.11.

3.2 **Implementing Changes in the On-line System**

When the entry, amendment and processing of the data has been successfully completed it will be necessary to issue an update command (UPDA) to the running UTC System before the changes to the data will take effect.

3.3 **Temporary Files**

The database edit options make a copy of all files containing data which may be changed. These copied files are known as temporary files and are the files which are actually changed. When the edit mode of the program is exited the user is asked if he wishes to keep or discard the changes which have just been made to the database.

3.4 **Data Editing Methods**

The edit part of the program uses different methods of entering new data or changing existing data. The method to be used, to some extent, depends on the computer system.

An Alpha based computer system may use either the Forms Based method or the HTML DBAS system to edit UTC and SCOOT data and the EDT editor to edit the message texts.

A PC SCOOT system may use either the Forms Based method or the HTML DBAS system to edit UTC and SCOOT data and the simple text editor to edit the message texts.

Descriptions of the various methods are:

3.4.1 **Forms-Based**

The Forms-Based method of data entry is used for the entry of UTC and SCOOT data and the following points should be borne in mind:

- (a) The fields where data may be entered are shown by a "[" at the beginning and a "]" at the end.
- (b) Each data item entry is terminated by pressing the <TAB> key which will move the flashing cursor on to the next field. Pressing <TAB> in the last field will move the cursor to the first field again.
- (c) If a 'Field Full' error message appears, pressing the <BACKSPACE> key an appropriate number of times will delete characters in the field which will enable new characters to be typed in.
- (d) Pressing <RETURN> will finish the entry of data into the form, or part of the form. If entering new data you will be asked if you wish to create a new record or abandon the input; pressing <Y> will create a new record. If existing data is being amended, the System will prompt for one of <S> to save the amendments, <D> to delete the record or <A> to abandon the edit and discard any changes made to that record. Any data saved will be stored in one of the temporary files for subsequent processing.

- (e) Pressing the <-> key in the numeric keypad (on the right hand side of the keyboard) will abort the edit of the current form and return you to the menu without retaining any of the changes made to the data shown in that form.
- (f) Pressing either the <PF2> or <HELP> key will display a help text which may aid you to overcome the current problem. Some forms have more than one screen of help information; repeated pressing of the <HELP> key will step through the help screens; when no more help is available an appropriate message will be displayed.
- (g) Within certain forms the data consists of rows of a table; each row having the same format. In order to edit or add a new row of data the row number should be entered in the left hand field of the separate edit row near the bottom of the screen and the <TAB> key pressed. Any existing data will be moved into the edit row to allow it to be changed. Once again the <TAB> key is used to move between fields. When the data entry is complete, pressing the <RETURN> key will cause the screen to be redrawn with the amended/new data in place.

3.4.2 EDT Editor

The UTC System computers use an operating system known as VMS (Virtual Memory System). EDT is the standard VMS text editor and you are recommended to read the appropriate manual for detailed instructions on how to use the editor.

On-line Help is available which can be accessed by pressing the "Help" (or <PF2>) key from a DEC terminal or terminal emulator.

To finish the editing session and return to the menu use the key sequences as follows:

<PF1><X> Any changes made during the editing session are kept.

<PF1><Q> Any changes made during the editing session are discarded.

While the editor is starting and finishing, information is displayed on the terminal regarding the files being read or written.

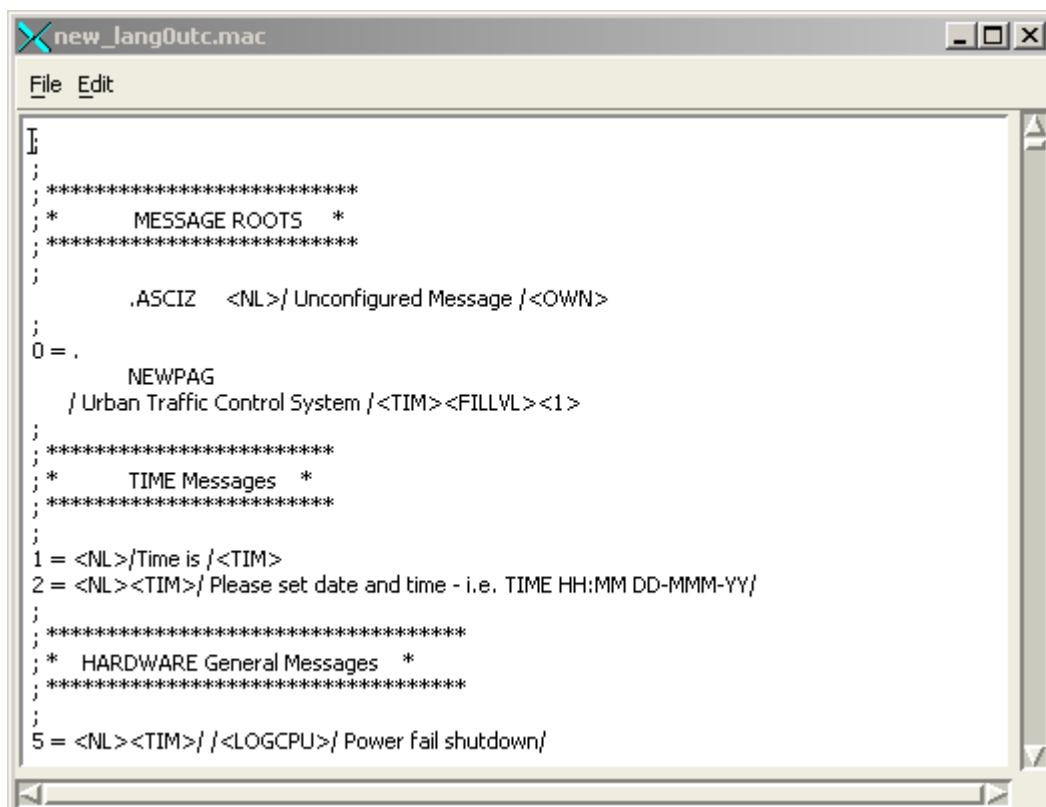
The EDT editor is used to change the Message data.

3.4.3 HTML DBAS

The HTML DBAS method of data entry is used for the entry of UTC and SCOOT data within an Internet Explorer window with the mouse cursor enabling the user to easily navigate around the various forms. Example forms are to be found in Appendix B.

3.4.4 Simple Text Editor

The Simple Text editor allows the user to insert and delete text and to cut, copy and paste text. An example screen is shown below



3.5 Starting the Forms Based Data Entry Program

The database program is started either by selecting the DBAS option from the Manager Menu on an MMI terminal or by typing the command :

DBAS <RETURN>

at a terminal which has level 16 access.

It should be noted that the System will only allow one user to run the data preparation program at any one time. The timetable preparation (TTBP) and plan preparation (PPRP) programs are also connected to database preparation. If either of these programs are in use, DBAS is not available.

The terminal on which this command is entered is inhibited from receiving any further system messages and is not capable of entering any further system commands until the database preparation process exits.

3.6 Welcome Screen and Main Menu

After starting the program the welcome screen is shown; press <RETURN> to continue.

```
*****
*
*           Welcome to ANYTOWN COUNCIL UTC/SCOOT Data Preparation.
*
*           Session commencing at 10-SEP-1996 23:40:35.02
*
*****

Checking for MESSAGES temporary files
-----

FMS Data files up to date
Press [RETURN] to continue
      ([HOLD] to hold screen)█
```

At this point the user may be asked if he wishes to use the “Temporary Files” of to delete them. Temporary files may exist if the latest changes to the database have not been successfully processed. Usually the user will elect to keep the temporary files and edit them further.

```

-----
DATA PREPARATION - MAIN MENU
-----

You have the following choices:

      L - List data source files
      E - Edit menu
      P - Process menu
      B - Backup source files
      C - Checkpoint Manager

      F - Finish Data Preparation

Please enter your selection, or H for Help: █
```

You will then see the main menu screen as shown above. In order to select an operation one of the letter keys L, E, P, B, F, C or H should be pressed, followed by the <RETURN> key.

The screen shown above is that of an Alpha based UTC system,; in a PC SCOOT system the “B – Backup source files” option is not present.

It should be noted that the checkpoint facility is a licenceable one.

3.7 List Data Source Files - Main Menu Option L

```
-----  
DATA PREPARATION - LIST MENU  
-----  
  
You have the following choices:  
  
    U - select UTC data [not selected]  
    S - select SCOOT data [not selected]  
    P - select Plan Data [not selected]  
  
    T - select Time of day timetable data [not selected]  
    W - select day of Week / date of year timetable data [not selected]  
    M - select UTC Message texts [not selected]  
    N - select SCOOT message texts [not selected]  
  
    O - select Overlayed OTU bits information [not selected]  
    E - select OTU Equipment allocation [not selected]  
  
    A - select All source data  
    L - List all selected data to printer or terminal  
  
    F - Finish List Menu (return to Main Menu)  
  
Please enter your selection, or H for Help: █
```

The list menu (see above) shows the range of list options. Pressing one of the keys W, M, N, O or E followed by <RETURN> will cause the "not selected" message alongside the chosen option to change to "selected". Making the same selection again will cause the message to revert to "not selected". Pressing U, S, P or T will cause secondary menus to appear allowing you to select from a further range of options. To list all of the data, pressing A <RETURN> will cause all the "not selected" messages to change to "selected".

Pressing F <RETURN> returns you to the data preparation main menu.

Pressing L <RETURN> causes the List Screen (see below) to be shown.

```
LIST ALL SELECTED DATA AREAS  
-----  
  
You can list the data files to the standard printing device or to  
your terminal.  
  
Do you wish to list the file(s) to the printer (Enter Y,yes, or N,no) [Y]: █
```

Pressing <RETURN> on its own will accept the default option to list the selected files to the printer. Pressing N <RETURN> will cause the selected files to be listed on the terminal.

If you have selected the option to list the files to the terminal the files will be displayed on the terminal. At the end of each screen of data you are invited to press <RETURN> to show the next screen. If you wish to abort the listing the

<CONTROL> and Z keys should be pressed simultaneously. When the printing and/or display of data is finished you are returned to the main menu.

The format of the information output is described in the Data File Format Guide, reference 1.3.8 except for options O and E, which are included for information only. Samples of the outputs are shown in Appendix E.

Option O identifies where an OTU bit is allocated to more than one piece of equipment.

Option E lists the equipment allocated to each OTU in address order.

3.8 Edit - Main Menu Option E

The various options which allow you to edit the files which make up the UTC "database" are accessed through the Data Preparation Edit Menu which is shown below. A description of the various option letters and their effects follows.

```

-----
DATA PREPARATION - EDIT MENU
-----
You have the following choices:

    U - UTC Edit Menu

    S - SCOOT Edit Menu

    M - UTC Message Texts

    F - Finish edit menu (return to Main Menu)

Please enter your selection, or H for Help: █
```

3.8.1 U - Edit Forms-Based UTC Data

When the Edit Forms-Based UTC Data option is selected you are presented with the menu of UTC forms similar to that shown below. Some of the options in the menu below may not be present on your screen as not all facilities are available to all customers. The instructions on the screen should be followed to select the required form and the data entered into the form using the instructions given previously. The formats of the various forms used are shown in Figures 1 to 31 of Appendix A.

```

-----
DATA PREPARATION - UTC EDIT MENU
-----
You have the following choices:

    1. Instation Hardware Data Menu
    2. Subarea/Traffic Computer (TCC)
    3. Outstation Hardware Data Menu
    4. Junction and Pelican Data Menu
    5. Other Equipment Data Menu
    6. Diversion Data Menu
    7. Remote Request
    8. Automatic Plan Selections (APS)
    9. Wall Map Data
   10. Digital I/O Blocks
   11. System Wide Variants

    F - Finish UTC Edit Menu (Return to Previous Menu)

Please enter your selection, or H for Help: █

```

Upon selecting an option either a data entry screen will appear or a further menu screen in a similar format to the above. In the menu options "F" will exit back to this point.

When finished the "F" option in this menu takes you to the screen shown below. Normally you wish to keep the work you have done and hence answer yes. If however you do not wish to keep the information, or have made no changes, answer no and the temporary files will be deleted.

```

UTC FMS Updates Complete
-----

The old FMS data files have been saved during the course of editing.
You now have the option of abandoning the changes made to the FMS
data files and restoring the originals. Normally you will want to keep
any changes you have made - answer 'Y' to the following question.
If you do want to abandon the edits you have just made and restore the
data files to their previous state, answer 'N'.

Do you wish to keep the changes you have just made (Enter Y,yes, or N,no): █

```

3.8.2 S - Edit Forms-Based SCOOT Data

When the Edit Forms-Based SCOOT Data option is selected you are presented with the menu of SCOOT forms shown below. The instructions on the screen should be followed to select the required form and the data entered into the form using the instructions given previously.

When a network is being entered for the first time it is necessary to enter the data in the order given on the menu as cross checking is performed between the forms.

The formats of the various SCOOT data forms used are shown in figures 32 to 38 of Appendix A.

```
-----  
DATA PREPARATION - SCOOT EDIT MENU  
-----  
You have the following choices:  
  
    1. Area Data  
    2. Region Data  
    3. Node Data  
    4. Stage Data  
    5. Link Data  
    6. Link Stage Data  
    7. Detector Data  
  
    F - Finish SCOOT Edit Menu (Return to Previous Menu)  
  
Please enter your selection, or H for Help:
```

3.8.3 M - Edit UTC Message Texts

```
-----  
DATA PREPARATION - Edit Message Files  
-----  
You have the following choices for language ENGLISH:  
  
    U : UTC Message Text File  
    S : SCOOT Message Text File  
  
    F - Finish Editing Language Files (Return to Previous Menu)  
  
Please enter your selection, or H for Help: █
```

Press one of the keys U, S, or F to select an operation.

The UTC Message Text File option allows you to use the EDT editor to edit the contents of the LANG0UTC.MAC file. After the <RETURN> key is pressed a message appears on the screen which informs you that a temporary copy of the file containing the message texts is being made for editing. The data preparation

program then transfers to the EDT editor program to allow the texts to be edited. On leaving the editor you are returned to the Data Preparation Edit Menu.

The SCOOT Message Text File option allows you to use the EDT editor to edit the contents of the SCOMSG.MAC file. After the <RETURN> key is pressed a message appears on the screen which informs you that a temporary copy of the file containing the message texts is being made for editing. The data preparation program then transfers to the EDT editor program to allow the texts to be edited. On leaving the editor you are returned to the Data Preparation Edit Menu.

The SCOOT message texts are difficult to set up and you are strongly advised not to change the existing message texts.

Use of EDT is described in section 3.4.2.

3.8.4 F - Finish Edit Menu

The Finish Edit Menu option returns you to the Main Menu.

3.9 Process Data - Main Menu Option P

Processing converts the data entered into a form suitable for use by the System. It reformats the data, if necessary, for use by the listing option on the main menu and carries out further data checks to those performed at data entry time.

3.9.1 Selection of Data to be Processed

After selecting the Process Data option you are presented with the Data Process Menu shown below. Selecting options D or M will cause the "not selected" message shown against the option to change to "selected" and vice versa. Alternatively, selecting the Finish option causes no data to be selected. After making a selection you are returned to the Data Process Menu shown below with the result of your selection shown alongside the data to process option.

```
-----  
DATA PREPARATION - PROCESS MENU  
-----  
You have the following choices:  
  
D - select forms-based UTC and SCOOT data           [not selected]  
P - correct errors in Plan data  
M - select UTC Message Texts                       [not selected]  
A - process All selected data  
L - List Error Files from data processing  
F - Finish process menu (return to Main Menu)  
  
Please enter your selection, or H for Help: █
```

3.9.2 Order of Processing

Much of the system data is interdependent. As a result there are certain restrictions on the order in which data may be successfully processed.

The UTC_SCOOT data must be successfully processed first as this declares the SCNs referred to by several other data areas.

If several data areas are selected for processing at the same time, the System automatically processes them in the correct order.

3.9.3 Processing of Data

Selecting the "process All selected data" option initiates the data processing phase which processes each category of data in turn. In a multi-machine System a further screen will appear, this is used to determine which TCC's data is prepared. As the processing of each category of data starts an appropriate message is shown. Any errors or problems found during the processing of data are shown on your terminal, as well as being stored in an error file. You are informed when the processing of a particular category of data is finished. When the processing of all the selected categories of data is complete, you are returned to the Data Process Menu.

3.9.4 Error and Warning Message Listings

At the end of the data processing phase, if error or warning messages have been produced you are asked if you wish to list the error files. Pressing <RETURN> will accept the default answer of Y to list the error files. This is repeated for each error file produced during data processing. You are then asked if you wish to list the error files on the terminal; pressing <RETURN> gives this default whereas pressing N <RETURN> will list the error files on the standard printer. If you have chosen to list the files to your terminal, the file will be shown a screen at a time, with prompts to press <RETURN> to continue to the next screen of error listing. When the error listings are complete you are returned to the Data Process Menu. If you wish to abort the listing the <CONTROL> and Z keys should be pressed simultaneously.

Error messages may be generated both as individual lines in the data file are read, and after the whole file has been read, and the data processor resolves cross references both within and outside the file. It is possible for one error to generate both types of error message. Some errors cause processing of the current file to be aborted. Others will cause consequential errors as otherwise correct data is found in apparently the wrong position.

Many errors are now trapped by the Forms data entry system, and hence the corresponding data processing error should never be seen.

The latest set of error listings can also be obtained by selecting the L option from the Data Process Menu. The error messages are shown and explained in section 6 of this handbook.

3.10 Backup - Main Menu Option B

The backup option allows the Alpha based UTC System user to create a backup copy of the UTC System's data on a tape. Details of the backup option will be found in the System Management Handbook (Reference 1.3.6). Details of the backup options available to a PC SCOOT system's user are to be found in the System Management Guide, Ref: 1.3.6.

3.11 Checkpoint Manager - Main Menu Option C

The Checkpoint Manager option allows the Alpha based UTC System user to create a backup copy of the UTC System's data on the TMC's hard disk. This option should only be used to create copies of the System's configuration data. Details of the Checkpoint Manager options available to a PC SCOOT system's user are to be found in the System Management Guide, Ref: 1.3.6.

After selecting the Checkpoint Manager option the user will be presented with the Data Checkpoint Save/Restore menu. This screen will show the name and date and time of any previous checkpoints whose data is stored in the System. If the name of an existing checkpoint is entered the user will be able to restore data from that checkpoint. If the default option is chosen, a new checkpoint with the name of DEFAULT will be created. If some other name is entered a new checkpoint with that name will be created. An example of the Data Checkpoint Save/Restore menu is shown below:

```
-----  
DATA CHECKPOINT - SAVE/RESTORE MENU  
-----  
  
The checkpoint filestore can hold more than one copy of the UTC system data.  
Press RETURN to use the default location for checkpoint data, select one  
of the following type EXIT or type in a new checkpoint name.  
  
          DEFAULT                      checkpoint: 28-APR-2003 15:49:44.95  
          HAMPSHIRE_15_04_2003         checkpoint: 15-APR-2003 10:42:02.38  
          TEST_02-MAY-03               empty  
  
Enter one of the above names, EXIT or a new one [DEFAULT]: test_02-may-03  
  
You can choose to either delete this checkpoint or proceed to the  
Data-Preparation BACKUP procedure  
  
Backup or Delete (B/D) [B]: █
```

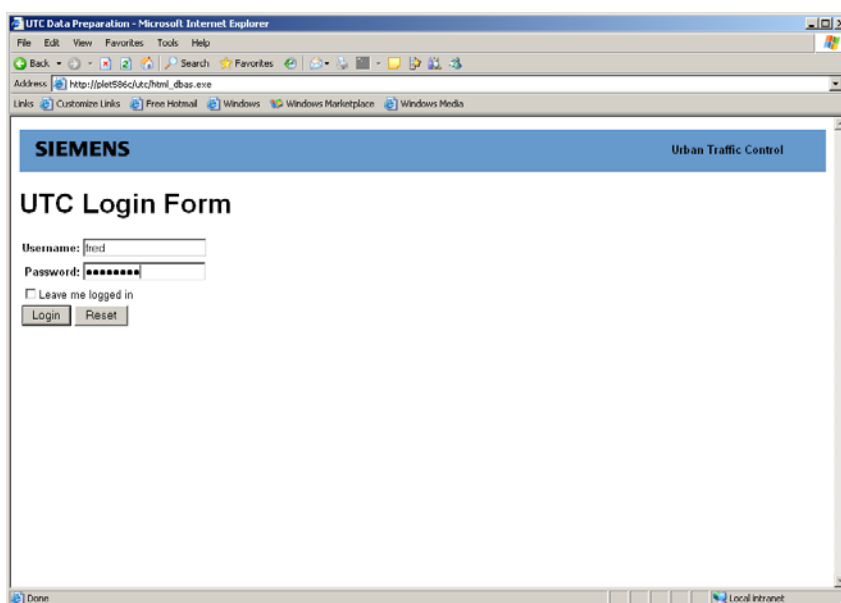
4. RUNNING THE HTML DATABASE PREPARATION PROGRAM

4.1 Data Entry Sequence

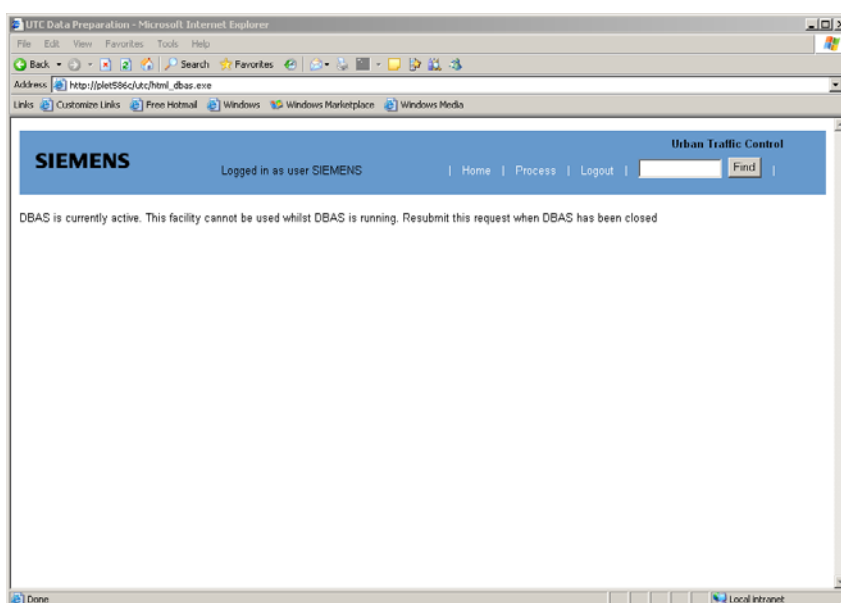
The order in which data is entered in to the System and the way in which it is processed is important. The sequence is the same as for the forms based data entry programs.

4.2 Starting the Program

The HTML database program is started by running Internet Explorer and entering a text string similar to <http://UTC888/DBAS> where UTC888 is the node name of the UTC TMC computer. A UTC login form should then appear; the user should enter his normal UTC login name and password.

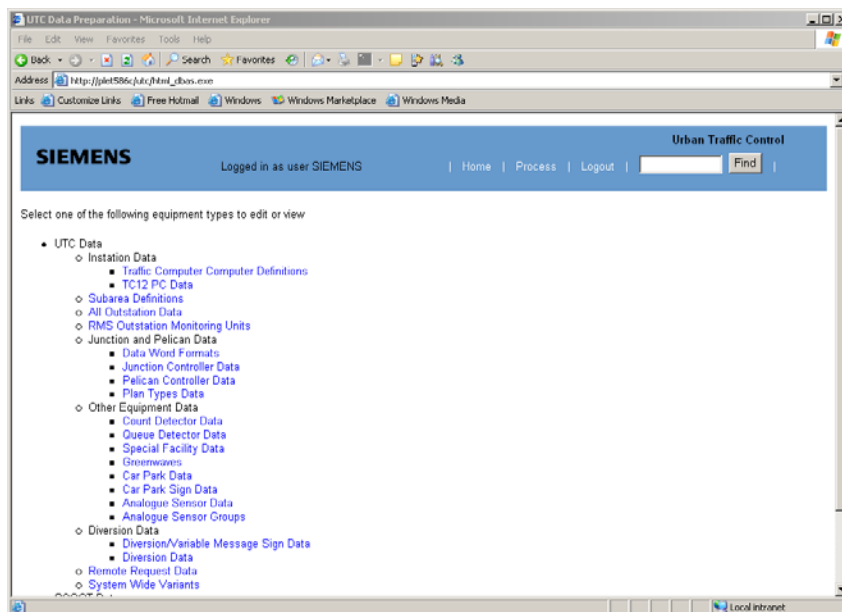


If DBAS is already running at another terminal the following screen will appear

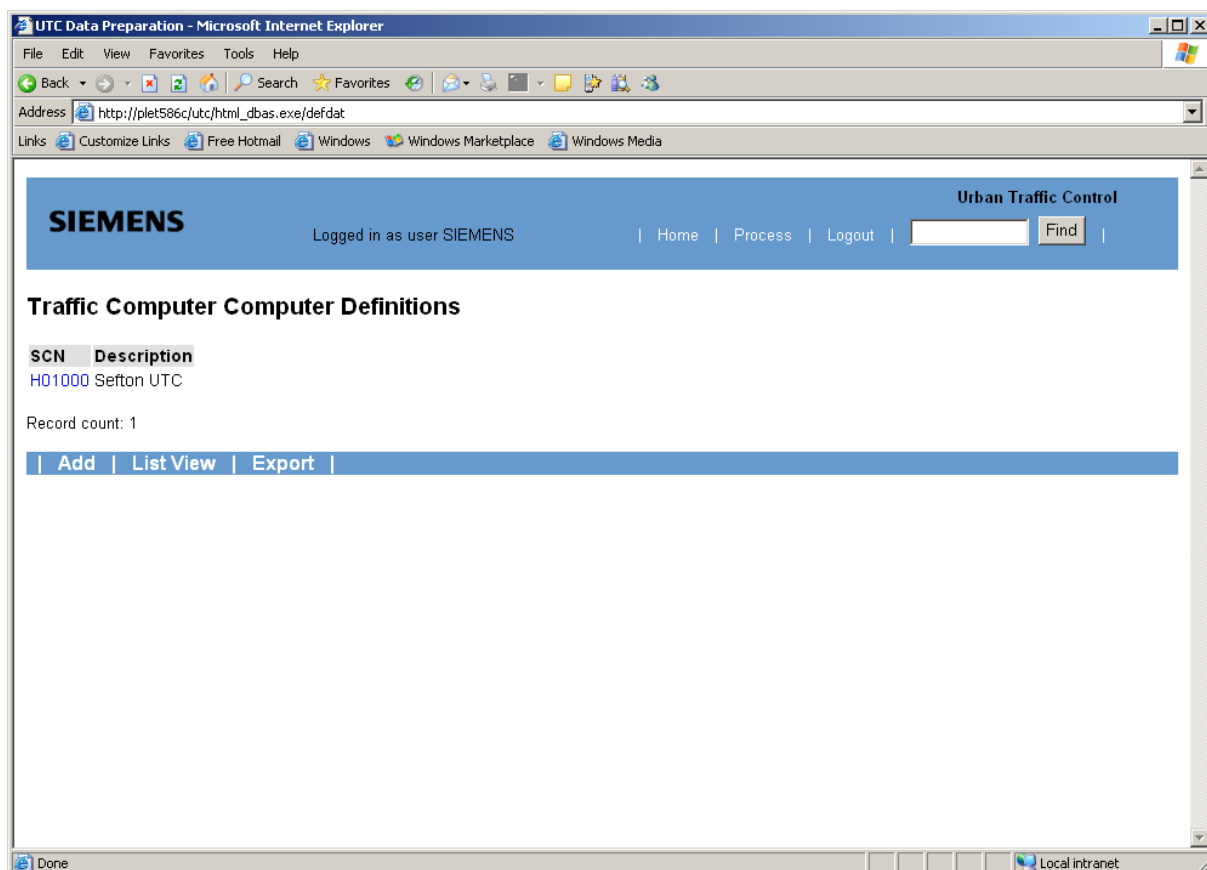


If the DBAS currently active window appears you should make sure that all DBAS windows, including editor windows, are closed.

When all other DBAS windows are closed clicking on Home will bring up the DBAS Home window. If DBAS is not active elsewhere the home screen will appear immediately after logging in.



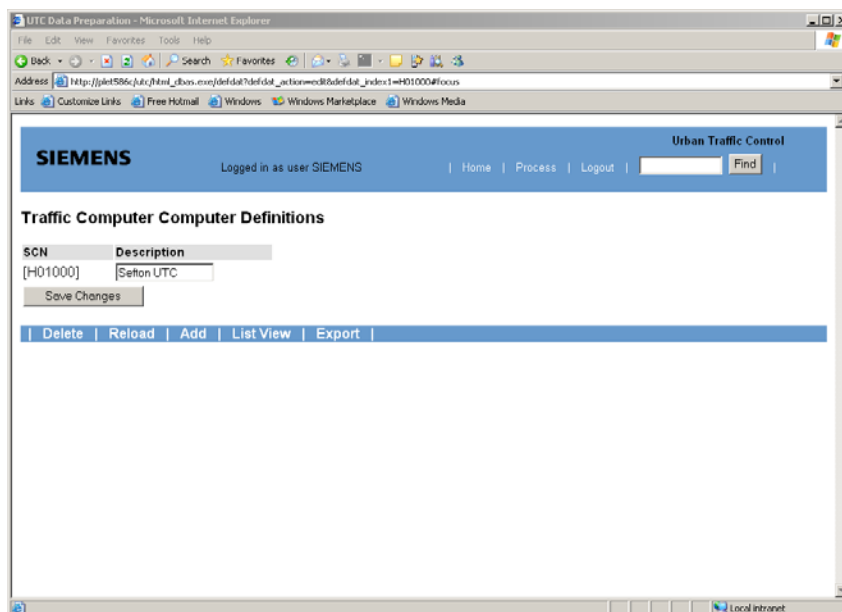
Example screens which show the entry of data into the HTML DBAS screens are shown in Appendix B.



The Traffic Computer Definitions screen shows the facilities available. They are described in the following paragraphs.

4.3 Editing Data

Clicking on the blue highlighted SCN will allow the selected data to be edited



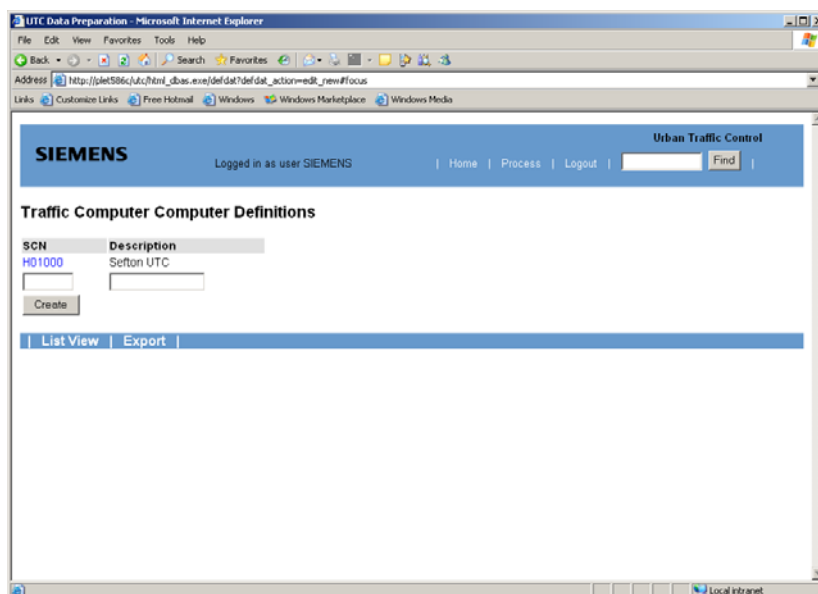
After making any changes to the data the Save Changes button should be clicked. If changes are not be saved clicking on the List View button will return to the list of data.

Users may find the following techniques useful:

- When adding a new SCOOT node, having entered the SCN, click on the “get defaults” button to copy the description from the junction or pelican with the same SCN digits.
- When adding ‘node equipment data’, if a junction or pelican SCN exists matching the node SCN then the field is preset to this otherwise it is left blank.
- Where there is no ambiguity the equipment letter (J, P, N etc.) may be omitted from the SCN. When the ‘Save’ button is clicked the letter will be filled in automatically. If the equipment type letter cannot be determined, an error will be displayed and the data will not be saved.

4.4 Adding Data

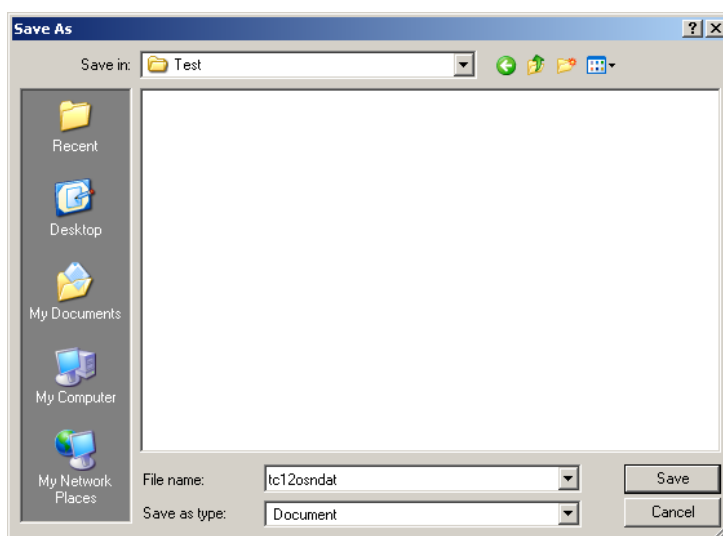
Clicking on the Add button will bring up a series of empty data entry boxes which should be filled with the required data. Clicking create will create the new data record.



During data entry some data items will be checked for correctness, any errors will be highlighted.

4.5 Exporting Data

Clicking on the Export button will open a Save As dialog window. This will save to a file the data being viewed. The user should navigate to the required folder and, after making any changes to the file name, click on save.



4.6 Processing Data

On completion of data entry the Process button should be clicked. As the data is processed any errors or warnings will be shown in the same way as for the forms based data entry system.

When the data has been processed without any errors it may be introduced into the running UTC system by means of the UPDA command.

5. TERMINAL AND USER ACCOUNT CONFIGURATION

5.1 Terminal Dialogue

The Terminal Dialogue method of data entry is used for the editing of terminal data and the following points should be borne in mind:

- (a) Each command or data item entry is terminated by pressing the <RETURN> or <ENTER> key.
- (b) Yes or No answers to questions can be made by pressing the <Y> or <N> key, as appropriate, followed by <RETURN>.
- (c) The default, or current, value of an item is often shown enclosed in square brackets. This value can be accepted by pressing <RETURN>.

5.2 Starting the Program

The Terminal and User Account Configuration program is started either by selecting the TUAC option from the Manager Menu on an MMI terminal or by typing the command

TUAC<RETURN>

at a terminal which has level 16 access.

It should be noted that the System will only allow one user to run the Terminal and User preparation program at any one time. The terminal entering this command will not receive any further traffic system messages or be able to enter any traffic commands until the command has finished.

The timetable preparation (TTBP), plan preparation (PPRP) and database preparation programs are also connected to terminal and user preparation. If either of these programs are in use, TUAC is not available.

5.3 Welcome Screen and Main Menu

After starting the program the welcome screen will be shown see below.


```
*****
*
*   Welcome to SURREY COUNTY COUNCIL Terminal and User Account Configuration. *
*
*           Session commencing at 10-SEP-1996 15:49:26.78
*
*****

Checking for TERMINALS temporary file
-----

Checking for Command Access Level temporary file
-----

Press [RETURN] to continue
    ([HOLD] to hold screen)█
```

The temporary files referred to in this display are files which exist if either the latest changes to the "terminal database" have not been prepared or if the "terminal database" was found to contain errors when the "terminal database" files were last prepared. At this point the program allows the user to elect to use the existing temporary files for the editing process or to make a copy of the permanent "terminal database" files to use for editing.

You are invited to press <RETURN> to continue.

```
-----
Configuration - Main menu
-----

You have the following choices:

    L - List Configuration
    E - Edit Configuration
    P - Process Configuration
    X - List Processing Errors

    F - Finish Configuration

Please enter your selection, or H for Help: █
```

You will then see the main menu screen as shown above. In order to select an operation one of the letter keys L, E, P, X, F or H should be pressed, followed by the <RETURN> key.

5.4 List Configuration File - Main Menu Option L

On selecting this option, a sub-menu is shown from which you may choose one of the following options by pressing the appropriate key followed by <RETURN>. T, C and A select the data to be listed, D gives you the option of listing the file(s) to the printer or terminal.

```
-----  
DATA PREPARATION - LIST MENU  
-----  
  
You have the following choices:  
  
    T - select Terminal/User Configuration                [not selected]  
    C - select Command Access Levels / Confirmation      [not selected]  
    A - select All Files  
    D - Do LIST for all selected files  
    G - Go back to Main  
  
Please enter your selection, or H for Help:
```

5.5 Edit Configuration File - Main Menu Option E

On selecting this option, the Configuration Edit menu is presented; enter T for Terminal/User Configuration, C for Command Access Levels and Command Confirmation, and G to go back to the main menu.

Selecting T gives the menu shown below. For details of the Command Access Levels configuration, see Section 5.5.16.

```
-----  
                This is the terminal data edit menu.  
-----  
  
You may select one of the following options:  
  
E      Edit terminal data.  
R      Remove a terminal (VDU/printer).  
V      Add a VDU.  
P      Add a printer.  
L      List terminal data.  
S      Summarise terminal data.  
B      Enter/amend DST dates.  
T      Enter/amend display timeout value.  
D      Select system printer used by data prep  
U      Enter/amend User data.  
M      Enter/amend Modem data.  
A      Enter/amend serial AVL data.  
  
X      Update the file and exit terminal configuration.  
G      Exit terminal configuration without change.  
  
PLEASE ENTER AN OPTION > █
```

5.5.1 E - Edit Terminal Data

Your screen shows how many terminals, including VDUs and printers are currently defined and you are requested to enter a number in the range 1 to (number of terminals defined). If 0 or a number greater than (number of terminals defined) is entered you are told that the value is 'out of range' and prompted to re-enter the number within the range.

The screen will show the characteristics of the terminal selected. If the selected terminal is a printer the display will be similar to that shown below. Note that if the selected printer is to be the Export printer the set up should be similar to that shown in Appendix D - .

```

Number 2 (PRINTER)
SCN              - T01002
DESCRIPTION      - Report Printer
PHYSICAL NAME    - _LTA8008:

BAUD RATE        - 9600
LANGUAGE         - ENGLISH
TYPE             - HARDCOPY
FORM_LENGTH      - 66
UTC_OUTPUT       - NO
SCOOT_OUTPUT     - NO
NARROW_PAPER     - YES
INHIBIT_INQUIRE - NO
LOG_PRINTER      - NO

Press <CR> to continue > █

```

If the terminal is a VDU or IBM compatible PC the display will be similar to that shown below.

```

The number of terminals defined is  3
Number 3 (TERMINAL)
SCN              - T01006
DESCRIPTION      - REMOTE PC
PHYSICAL NAME    - _LTA903:

BAUD RATE        - 9600
LANGUAGE         - ENGLISH
TYPE             - IBM_PC
COMMAND_LEVEL    - 1
SUB-AREAS        - ALL
Colour printer   - T01002
Monochrome printer - T01001
Terminal function options :
DCL_COMMANDS     - YES          UTC_COMMANDS      - YES
SCOOT_COMMANDS   - YES          UTC_OUTPUT     - YES
SCOOT_OUTPUT     - YES          INHIBIT_INQUIRE - NO
NARROW_PAPER     - NO          URGENT_TERMINAL - NO
OVRB_ALLOWED     - YES          STATUS_LINE    - YES

Press <CR> to continue > █

```

After pressing <RETURN> you are presented with the Terminal Data Edit Sub Menu which, if the terminal is a printer, will be similar to that shown below.

```
-----  
      This is the terminal data edit sub menu.  
-----  
  
You may select one of the following options:  
  
      CBAU      Change baud rate.  
      CSCN      Change terminal scn  
      COES      Change terminal description  
      CPHY      Change terminal physical name  
      CHAR      Change characteristics.  
      CTYP      Change type.  
      CLEN      Change form length.  
      LIST      List device.  
  
      G          Go back to main menu.  
  
PLEASE ENTER AN OPTION > █
```

If the terminal is a VDU, the sub-menu will be similar to that shown below.

```
-----  
      This is the terminal data edit sub menu.  
-----  
  
You may select one of the following options:  
  
      CBAU      Change baud rate.  
      CSCN      Change terminal scn  
      COES      Change terminal description  
      CPHY      Change terminal physical name  
      CHAR      Change characteristics.  
      CTYP      Change type.  
      CMDL      Change command level.  
      ASUB      Add a subarea.  
      DSUB      Delete a subarea.  
      AALL      Add all configured subareas.  
      DALL      Delete all configured subareas.  
      COLP      Select colour dumping printer.  
      BWPR      Select monochrome dumping printer.  
      LIST      List device.  
  
      G          Go back to main menu.  
  
PLEASE ENTER AN OPTION > █
```

The various options which are contained in the 2 menus are as follows:

5.5.1(a) CBAU - Change Baud Rate

You are presented with the Change Baud Rate menu shown below. To accept the current value press <RETURN> otherwise enter 1, 2, 3, 4, or 5 followed by <RETURN> to select a different rate.

```
There are 6 baud rates available
```

- 1) 300
- 2) 1200
- 3) 2400
- 4) 4800
- 5) 9600

```
Press <CR> for no change.
```

```
The current value is 9600 (5)
```

```
Enter the baud rate (1-5) > █
```

5.5.1(b) CSCN - Change Terminal SCN

You are presented with a list of those SCNs which are designated as being terminal SCNs together with the SCN which is currently allocated to the terminal under consideration, as shown below. Press <RETURN> to accept the current selection or else type in the required SCN from the list shown. If an SCN which is not in the given list is entered then the message 'Not an Allowed SCN' will be shown and you are invited to enter a valid SCN.

```
Please enter the SCN,
```

```
Current terminal SCN is T01001
```

```
Enter new terminal SCN (Default is current SCN) > █
```

5.5.1(c) CDES - Change Terminal Description

The description is an operational name to describe the terminal in up to 15 characters. You are presented with the following :

```
Current description is Log Printer  
  
Enter new description, up to 15 characters  
press <CR> to leave unchanged >
```

5.5.1(d) CPHY - Change Terminal Physical Name

The physical name of a terminal is the name of the physical port or device on the UTC computer to which the terminal is connected. Enter the name of the device or press <RETURN> to accept the currently allocated name.

If the terminal's physical name is being changed then the UTC System Software Maintenance contractor should be consulted for suitable alternatives.

```
Current physical device is _TTA3:

Enter new value of physical name.
The format of a physical name is :-
_AAA9999999:
[_ (three alphabetic characters)(1-7 digits):]

press <CR> to leave unchanged >
```

5.5.1(e) CHAR - Change Characteristics

The characteristics of the terminal are changed by making a yes or no response to a series of questions which if the terminal is a printer are shown below.

```
Press <CR> for no change.
UTC_OUTPUT [Current value is NO] (Y/N) ?
SCOOT_OUTPUT [Current value is NO] (Y/N) ?
NARROW_PAPER [Current value is YES] (Y/N) ?
INHIBIT_INQUIRE [Current value is NO] (Y/N) ?
LOG_PRINTER [Current value is YES] (Y/N) ?
```


If the terminal is a VDU the questions are as shown below.

```
Press <CR> for no change.  
DCL_COMMANDS [Current value is YES] (Y/N) ?  
UTC_COMMANDS [Current value is YES] (Y/N) ?  
SCOOT_COMMANDS [Current value is YES] (Y/N) ?  
UTC_OUTPUT [Current value is YES] (Y/N) ?  
SCOOT_OUTPUT [Current value is YES] (Y/N) ?  
INHIBIT_INQUIRE [Current value is NO] (Y/N) ?  
NARROW_PAPER [Current value is NO] (Y/N) ?  
URGENT_TERMINAL [Current value is NO] (Y/N) ?  
OVRB_ALLOWED [Current value is YES] (Y/N) ? █
```

(1) DCL_COMMANDS

Setting the DCL_COMMANDS variable to yes allows the user of the terminal access to the computer System's native DCL command language as indicated by the \$ prompt.

(2) UTC_COMMANDS

Setting the UTC_COMMANDS variable to yes allows the user of the terminal to issue commands which control the UTC System.

(3) SCOOT_COMMANDS

Setting the SCOOT_COMMANDS variable to yes allows the user of the terminal to issue commands which control the SCOOT System.

(4) UTC_OUTPUT

When the UTC_OUTPUT variable is set to yes those messages which relate to the SCNs of UTC equipment will be shown in this terminal.

(5) SCOOT_OUTPUT

When the SCOOT_OUTPUT variable is set to yes those messages which relate to the SCNs of SCOOT equipment will be shown in this terminal.

(6) INHIBIT_INQUIRE

When the INHIBIT_INQUIRE variable is set to yes the automatic inquiries from the UTC System to the terminal are inhibited. Therefore if the terminal goes off-line the System will not be aware of it.

(7) NARROW_PAPER

This option allows you to specify to the System whether or not a printer is using narrow paper, i.e. 80 columns instead of 132 columns.

(8) URGENT_TERMINAL

If a terminal is designated as an urgent terminal then only those messages whose definitions have an <URG> flag attached to them will be shown on that terminal.

(9) OVRB_ALLOWED

Only if the OVRB_ALLOWED variable is set to yes will you be able to issue the override control/reply bits command OVRB from the terminal.

(10) STATUS_LINE

Only if the STATUS_LINE variable is set to yes will a VDU type terminal show the status line at the bottom of the screen.

(11) MODEM_TYPE

If the device connected to this port is a modem then the MODEM_TYPE variable must be set to yes.

(12) LOG_PRINTER

A printer which has the LOG_PRINTER variable set to yes will provide a hard copy log of all commands issued to the System and all messages output by the System. Note that each System must have a log-printer defined.

5.5.1(f) LIST - List Device

This command lists the details of the chosen printer on your terminal. When the <RETURN> key is pressed you are returned to the Terminal Data Edit Sub Menu.

5.5.1(g) CMDL - Change Command Level

Each UTC and SCOOT System command has a level number (1 to 16) associated with it. The method of changing the association between a command and its level number is described in Section 5.5.16 [ibid]. The greater the command level the more significant is the amount of change which can be made to a running System by the use of that command. Command level 1 is the lowest level and 10 or 12 are the normal operating levels. From a terminal with a command level of 1, only level 1 commands can be issued, commands of levels 1 and 2 can be performed from a terminal with level 2 privileges, and a terminal of level 3 is needed to be able to issue commands of levels 1, 2, and 3 etc.

5.5.1(h) CLLEN - Change Form Length

The form length, or number of lines per page, for a printer is set using this command. You are told what the current setting is and invited to enter a number in the range of 50 to 90 to set a new value.

5.5.1(i) CTYP - Change Type

You are presented with the screen display shown, which shows the various types of terminal which can be connected to the System. Selection is made by entering the appropriate number.

```
There are 2 types of terminals

1) Hardcopy devices such as LA120,LA100,LA34 etc.
2) PCL Level 3 compatible printer such as HP DeskJet
The current value is 1

Enter the terminal type (1-2) > █
```

5.5.1(j) ASUB - Add a Subarea

A UTC System controls an area which may be split up into a number of sub areas. Each Sub area is designated by a unique number in the range 1 to 99. An individual terminal can be restricted so that it can only control certain sub areas. Sub areas are added to the existing list of controlled sub areas one at a time by entering the number followed by <RETURN>.

5.5.1(k) DSUB - Delete a Subarea

A single sub area can be removed from the list of sub areas controlled from a terminal by choosing the DSUB option and then entering the number of the sub area followed by <RETURN>.

5.5.1(l) AALL - Add All Configured Subareas

The AALL option will put all the configured sub areas into the list of sub areas which can be controlled from the terminal.

5.5.1(m) DALL - Delete All Configured Subareas

The DALL option will empty the list of sub areas controlled by the terminal so that no sub areas can be controlled by the terminal.

5.5.1(n) COLP - Select colour dumping printer

Certain screen displays, such as produced by the DIPM command may be dumped to a printer; the COLP option determines to which colour printer the dumped output of the terminal is sent. You are presented with a screen similar to that shown below and invited to enter the appropriate printer SCN or press <RETURN> to accept the current value.

```
Please enter the SCN,  
Current colour printer is T01001  
Enter new colour printer (Default is current SCN) > █
```

5.5.1(o) BWPR - Select monochrome dumping printer

The BWPR option allows you to specify the SCN of the monochrome printer where the screen dumps from the terminal will appear in an identical manner to that described above for a colour printer.

5.5.2 R - Remove a Terminal (VDU/Printer)

When this option is chosen you are first asked to enter the number of the terminal. The characteristics of the chosen terminal are shown on the screen and you are asked to confirm with a yes/no answer if this is the terminal he wishes to delete. A yes answer will remove the terminal from the list of terminals, whereas a no answer will leave the terminal in the list of terminals.

NOTE: Do not remove the last terminal as this means that you will no longer be able to re-enter or use the System except through VMS commands.

5.5.3 V - Add a VDU

When the option to add a VDU is chosen a VDU will be added to the existing list of terminals and will be given a default set of values.

You are then presented with the Terminal Data Edit Sub Menu (Option E) to properly configure the newly added terminal.

5.5.4 P - Add a Printer

When the option to add a printer is chosen a printer will be added to the existing list of terminals and will be given a default set of values.

You are then presented with the Terminal Data Edit Sub Menu (Option E) to properly configure the newly added terminal.

5.5.5 L - List Terminal Data

The List Terminal Data option allows you to select a terminal by number and then displays the characteristics of the terminal.

5.5.6 S - Summarise Terminal Data

The Summarise Terminal Data option presents you with a list which shows the number, physical name and SCN of each terminal for which the System has been configured.

5.5.7 B - Enter/Amend DST Dates

The Enter/Amend DST dates option allows you to enter the start and end dates of Daylight Saving Time (DST). The screen display will be that shown below. You should follow the instructions given on the screen. If you choose to enter dates and the dates entered are not in the same year or the start date is after the end date, the DST dates are not changed and you are returned to the Terminal Data Edit Menu.

```
*** DST Configuration ***

This option allows you to change add or delete Daylight Saving Time dates to
the database. If you wish to delete the current settings, enter the word
NONE at the prompt for the first date. If you want to quit this option and
leave the current settings unchanged, press <CR> at either of the prompts.

Current DST dates are 27-MAR-94 to 23-OCT-94

This system has timezone/daylight saving rules setup which will
automatically determine the dates when the times should be changed. If you
configure DST start and end dates then the automatic rules will be disabled.
The recommended action is to set the start date to NONE

For your information, the rules determine that DST this year starts on
Sun Mar 26 01:00:00 2000 and ends on Sun Oct 29 02:00:00 2000

ENTER START DATE (DD-MMM-YY) > █
```

5.5.8 T - Enter/Amend display Timeout Value

The Enter/Amend Timeout Value option allows you to change the value (in minutes) of the display timeout which is used with live-update screen displays in the traffic System. If a live update screen is active on a terminal, it will be

terminated after the timeout period. You should follow the instructions given on the screen which is shown below.

```
*** Display Timeout Configuration ***

This option allows you to view, change or delete
the display timeout value used with live-update
screen displays on the traffic system

If you wish to delete the current value, enter
0 at the prompt for the value. if you want to quit
this option and leave the current value unchanged,
press <CR> at the prompt.
The default value for this option is 0 which means
that no display timeout is applied.

Current display timeout value is 0 minutes

ENTER THE NEW DISPLAY TIMEOUT VALUE (0-99) > █
```

5.5.9 D - Select System Printer used by Data Prep

The Select System Printer used by Data Prep allows you to choose which printer will be used for the output of error and data listings produced during the running of the data preparation program. Follow the instructions given on the screen which is similar to that shown below.

```
Please enter the SCN,

Current system printer is T99002

Enter new system printer (Default is current SCN) > █
```

5.5.10 U - Alter User Data

After choosing the Alter User Data menu you are presented with the User Data Edit Sub Menu (see below).

```
-----  
                This is the user data edit menu.  
-----  
You may select one of the following options:  
  
E      Edit user data.  
R      Remove a user.  
A      Add a user.  
L      List user data.  
U      List users.  
S      Change subareas.  
  
G      Go back to terminal data edit menu.  
  
ENTER OPTION > █
```

The options of this menu are:

5.5.11 E - Edit User Data

After selecting the Edit User Data option you are presented with a screen which shows details of the existing list of users (see below).

```
Users:-  
  
1.      SIEMENS      DIAL BACK - NO  
2.      TDA          DIAL BACK - NO  
3.      BELFAST      DIAL BACK - NO  
4.      MSD          DIAL BACK - NO  
5.      CRG          DIAL BACK - NO  
6.      R_C          DIAL BACK - NO  
7.      DAN          DIAL BACK - NO  
8.      RBM          DIAL BACK - NO  
9.      UGM          DIAL BACK - NO  
10.     RCA          DIAL BACK - NO  
11.     ROY          DIAL BACK - NO  
12.     KEU          DIAL BACK - NO  
13.     PAB          DIAL BACK - NO  
14.     WSK          DIAL BACK - NO  
15.     GEF          DIAL BACK - NO  
  
Enter user number (1 to 15) or Q to quit > █
```

Entering the number of the required user allows you either to change or accept the current value of each of the parameters for that user. The parameters are described below.

On completion of the editing sequence you are shown the current state of the user's configuration and invited to press return before being returned to the User Data Edit Menu.

(1) User-Id

The User-Id is the name which the user will be asked to enter in order to log in to the UTC System. The user-id must be at least 6 characters long with an alphabetic character being the first one.

(2) Password

The password is the password which the user must enter in order to be able to log in to the UTC System. The password must be at least 6 characters long with an alphabetic character being the first one.

(3) Callback

The callback facility offers increased security to the UTC System. After a user has been connected to the UTC System, the UTC System will automatically disconnect the user and ring back on the telephone number which is specified here. If the dialback facility is not required you should enter NONE at this point.

(4) Baud Rate

A screen similar to that below is shown to enable you to make any changes to the baud rate.

There are 5 baud rates available

- 1) 300
- 2) 1200
- 3) 2400
- 4) 4800
- 5) 9600

Press <CR> for no change.

The current value is 9600 (5)

Enter the baud rate (1-5) >

(5) Type of Terminal

A screen similar to that below enables you to make any changes to the selected type of terminal.

There are 7 types of terminals

- 1) Hardcopy devices such as LA120,LA100,LA34 etc.
- 2) VT100,VT131 etc.
- 3) The TECHEX 48 line colour terminal.
- 4) IBM PCS running terminal emulators.

5) VT200.

6) VT200 extended ie. Cihoh VT224.

7) VT320 /VT420.

The current value is 4

Enter the terminal type (1-7) >

(6) Colour Printer SCN

A screen similar to that below enables you to enter the SCN for the user's colour dump printer.

Please enter the SCN,

Current colour printer is T01001

Enter new colour printer (Default is current SCN) >

(7) Monochrome Printer SCN

A screen similar to that below enables you to enter the SCN for the user's monochrome dump printer.

Please enter the SCN,

Current monochrome printer is T01015

Enter new monochrome printer (Default is current SCN) >

(8) Command Level

A number in the range 1 to 16 is entered for the user's command level.

(9) Subareas

You are presented with the Subarea Configuration Menu for User. Your options in this menu are:

(10) AS - Add a Subarea

Sub areas are added to the existing list of controlled sub areas one at a time by entering the number followed by <RETURN>.

(11) DS - Delete a Subarea

A single sub area can be removed from the list of sub areas controlled from a dial-up terminal by choosing the DS option and then entering the number of the sub area.

(12) AAS - Add All Configured Subareas

The AAS option will put all the configured sub areas into the list of sub areas which can be controlled from the dial-up terminal.

(13) DAS - Delete All Configured Subareas

The DAS option will empty the list of sub-areas controlled by the dial-up terminal so that no sub-areas can be controlled by the dial-up terminal.

(14) G - Go back to Previous Menu

Choosing this option will take you out of the Subarea Configuration Menu for User on to the Allow DCL Commands stage of the user editing sequence.

(15) DCL Commands

Yes or no is entered to allow the user to use DCL commands.

(16) UTC Commands

Yes or no is entered to allow the user to use UTC commands.

(17) SCOOT Commands

Yes or no is entered to allow the user to use SCOOT commands.

(18) UTC Output

Yes or no is entered to allow the user to receive UTC output.

(19) SCOOT Output

Yes or no is entered to allow the user to receive SCOOT output.

(20) Narrow Paper

A yes is entered if the user's printer uses narrow paper.

(21) Urgent Terminal

If the user's terminal is to receive urgent messages only a yes should be entered.

(22) OVRB Allowed

Yes is entered to allow the user to use the OVRB command.

(23) Status Line

Yes is entered to cause the UTC System status line to be displayed on the user's terminal.

5.5.11(b) R - Remove a User

Choosing this option shows a list of the current users and asks you to enter the number of the user you wish to delete. After entering a number, you will then be prompted with :

Delete User XXXXXXXX (Y/N)

An answer Y deletes the user from the list of users and returns you to the User Data Edit Menu. An answer N will return you to the list of current users.

5.5.11(c) A - Add a User

The Add a User option takes you through a sequence of operations identical to that of the Edit a User sequence described above.

5.5.11(d) L - List User Data

The list of current dial-up users is shown and you are invited to enter the number of the dial-up user whose data you wish to see.

5.5.11(e) U - List Users

The user number, identity and callback details for each user is shown.

5.5.11(f) S - Change Subareas

You are presented with the Subarea Configuration Menu for Users with options as described above. Selecting option G from the sub-menu returns you to the Dealup User Data Edit Menu.

5.5.11(g) G - Go back to Terminal Data Edit Menu

The G option returns you to the Terminal Data Edit Menu.

5.5.12 M - Enter/Amend Modem Data

Selection of the M option displays the Modem Port Edit Menu shown below.

```
-----  
This is the Modem Port Edit Menu  
-----  
You may select one of the following options:  
E             Edit modem port  
R             Remove modem port  
A             Add a modem port  
L             List modem ports.  
G             Go back to terminal data edit menu.  
ENTER OPTION:
```

5.5.13 E - Edit Modem Port

After selecting the Edit modem port option you are presented with a list of the existing modems ready for editing.

Entering the number of the modem allows you to change or accept the current value of each of the parameters for that modem. The parameters are described below.

On completion of the editing sequence you are shown the current state of the modem configuration and invited to press <RETURN> before being returned to the Alter Modem Data menu.

Type new value or <CR> to leave unchanged.

Current Modem Port is _TTA2:

Enter new value of physical name.

The format of a physical name is :-

_AAA9999999:

[_(three alphabetic characters)(1-7 digits):]

Press <CR> to leave unchanged >

Enter the SCN of the computer to which the modem is connected

Current computer SCN is H01000

(1) Physical name

If connected directly to a computer's input/output port, then it is the name by which that port is known to the computer, and is specified by the computer manufacturer.

If the device is connected to a terminal server, the name used must be that which has been assigned to the port in the LAT setup file, which can be accessed during the System startup process.

The name starts with three alphabetic characters followed by between 1 and 7 digits.

(2) SCN

Enter the SCN of the computer to which the modem is connected.

(3) Baud Rate

A screen similar to that below is shown to enable you to make any changes necessary to the baud rate:

There are 5 baud rates available

- 1) 300
- 2) 1200
- 3) 2400
- 4) 4800
- 5) 9600

Press <CR> for no change.

The current value is 2400 (3)

Enter the baud rate (1-5) >

5.5.13(b) R - Remove Modem Port

After selecting the Remove modem port option you are presented with the list of the existing modems from which to choose.

Enter the number of the modem port to be removed and press <CR>. You will be asked to confirm the deletion by entering <Y>; to leave the modem port in the list enter <N>.

On completion of the deletion sequence you are shown the current list of modems and invited to press <RETURN> before being returned to the Alter Modem Data menu.

5.5.13(c) A - Add a new Modem Port

The Add a Modem Port option takes you through a sequence of operations identical to that of the Edit a Modem Port sequence described above.

5.5.13(d) L - List Modem Ports

This option allows you to view the modem ports currently configured.

5.5.14 X - Update the File and Exit Terminal Configuration

The selection of the X option stores the amended terminal configuration data in the terminal data configuration file of the "database" and returns you to the Data Preparation Edit Menu.

5.5.15 G - Exit terminal configuration without change

The G option returns you to the Data Preparation Edit menu, restoring the original data. All changes made to the terminal configuration data in this session are discarded.

5.5.16 C - Command access levels and Command confirmation

This option stores the access levels and confirmation status of all the commands on the System. Access levels (from 1 to 16) define which commands are available to users. A level of 1 is the lowest and all terminals may access a command with this level. 10 or 12 are the normal operating levels. If the command is to be confirmed before being actioned it may be specified using this option. An example command access level edit screen is shown below:

```
Command Access Level And Confirmation Data Entry
-----

Enter ? for help, EXIT - saving changes, QUIT - discarding changes

Command mnemonic          : MONI
Command level              : 4
Is command to be confirmed? [N] :
```

5.6 Process Configuration File - Main Menu Option P

On completion of an edit the data is processed by selecting 'P' from the Main menu. This option processes the Terminal and User Account Configuration and/or the Command Access Level source data into a form which the System can use. The -UPDA command is used to make the data "live". On finishing this process you are informed if there are any errors. Errors from the last run of processing may be listed by selecting the next option from the main menu, List Processing Errors.

5.7 List Processing Errors - Main Menu Option X

When the data processing is finished, if errors exist and it is required to list these errors select the 'X' option.

5.8 Finish Terminal and User Account Configuration - Main Menu Option F

Option 'F' exits from the menu and returns control to the traffic terminal control line.

If any temporary files were created during the configuration process they are deleted now.

6. ERROR MESSAGES

If errors are found in the data when it is being processed, error messages will be output to the screen and written to a file as well. The file of error messages can be printed after the particular data processing phase has finished.

The form of an error message will depend on the type of data which caused the error. The sources of the various error messages are given in the following sections, together with the format of the error message, and, where not obvious, some hint as to the cause of the error.

In the descriptions which follow, references will be made to "Macro" names, these names are the names of the various types of data used within the data preparation system.

It should be noted that some of the messages listed below are warning rather than error messages.

6.1 Format of Standard Error Message

The standard error message can be one of two types:

a. MACRO_NAME SCN IRN

Text of error message <PARAMETER>

b. FORM_NUMBER MACRO_NAME SCN IRN

Text of error message <PARAMETER>

Format a will be caused by an error in data which has been entered using the EDT editor and format b will emanate from data which has been entered using the forms data entry method. The meanings of the identifiers show above are as follows:

FORM_NUMBER	The number of the screen data entry form which was used to enter the data item. The number is preceded by either an "S" for a SCOOT form or a "U" for a UTC form.
MACRO_NAME	The name of the type of data which caused the error.
SCN	The SCN of the data item which caused the error.
IRN	The Internal Reference Number of the data item which caused the error.
<PARAMETER>	A parameter which may be given to help you identify the source of the error.

6.2 UTC/SCOOT Error Messages

ALL LINKS ON THIS NODE ARE ENTRY LINKS

CAR PARK SIGN GROUP 1, IS NOT DEFINED

CAR PARK SIGN GROUP 2, IS NOT DEFINED

CAR PARK SIGN GROUPS 1 & 2, ARE NOT DEFINED

CONTROL BIT IN REPLY BIT DEFINITION

A control bit mnemonic has been used in the definition of a reply bit.

CONTROLLER MUST HAVE SG/SR CONFIGURED IF LOCAL CYCLE TIME SPECIFIED

DIVERSION TYPES 1-3 NOT ALLOWED IN DIVERSION GROUP 0

EQUIPMENT NOT IN A LINKED LIST

EQUIPMENT NOT PART OF THIS NODE

EQUIPMENT ON DIFFERENT LINK LIST

EQUIPMENT WORD CONTROL/REPLY FORMAT NOT DEFINED

GREENWAVE ALREADY SPECIFIED IN A PREVIOUS REMDAT LINE

GREENWAVE HAS NOT BEEN SPECIFIED IN A REMDAT LINE

GREENWAVE PLAN ALREADY SPECIFIED IN A PREVIOUS REMDAT LINE

INITIAL REGION CYCLE TIME IS LESS THAN THE MINIMUM

INPUT LINE TOO LONG - EXITING

The input record in the data file is too long; as a result the data preparation program stops.

INVALID - ATTEMPT TO USE SAME BIT FOR MORE THAN ONE EQUIPMENT

INVALID BIT DEFINITION

An invalid bit mnemonic has been found in an equipment bit definition.

INVALID BOTTLENECK LINK

INVALID COMPUTER SCN

INVALID CONGESTION LINK

INVALID DOWN NODE THROUGH STAGE - STAGE DOES NOT EXIST

INVALID DOWN NODE THROUGH STAGE - STAGE IS REMOVEABLE

INVALID - DUPLICATE SCN

This SCN has been entered more than once.

INVALID - DUPLICATE VALUE

INVALID - EVEN VALUES ONLY ALLOWED

INVALID - EXCESS SCN(s) DEFINED

INVALID INPUT RECORD - EXITING

The program is unable to recognise the form of a line of data and is terminating prematurely.

INVALID INTEGER VALUE

The value should be an integer and it is not.

INVALID - IRN OUT OF RANGE

The IRN is outside of the permitted range, i.e. it is either less than 0 or greater than the the maximum IRN allowed for this type of equipment.

INVALID MACRO MNEMONIC

The macro mnemonic is not recognised.

INVALID - MACRO OUT OF ORDER

INVALID MAIN DOWNSTREAM LINK

The main downstream link SCN suffix is not a valid one for this node.

INVALID NAMED STAGE

INVALID ORDER OF PARAMETERS

INVALID PARAMETER

The value entered for a parameter is not correct.

INVALID RANGE FOR PARAMETER

INVALID REGION FOR TCC

INVALID REMOVABLE STAGE - NODE HAS LESS THAN 3 STAGES

INVALID REMOVABLE STAGE - SAME AS NAMED STAGE

INVALID SCN - DIGIT 3, 4 OR 5 IS 0

An SCN has its third, fourth or fifth digit set to zero.

INVALID SCN - EMBEDDED ZEROES IN GOE NUMBER

An SCN has its third, fourth or fifth digit set to zero.

INVALID - SCN NOT DEFINED

INVALID SCOOT REGION

INVALID STAGE LENGTH

INVALID SUB AREA

The sub-area is not in the range 1 to 99.

INVALID TERMINAL SCN

INVALID - TOO MANY PARAMETERS

INVALID TRANSITION FROM LAST STAGE IN FALLBACK TO FIRST IN NON-CYCLIC SEQUENCE

INVALID TRANSITION FROM LAST STAGE IN NON-CYCLIC TO FIRST IN FALLBACK SEQUENCE

INVALID TRANSITION IN STAGE SEQUENCE

INVALID - UP NODE = DOWN NODE

INVALID UP NODE THROUGH STAGE - NO SUCH STAGE ON UPSTREAM NODE

INVALID UP NODE THROUGH STAGE - STAGE IS REMOVEABLE

LINK STAGE DATA SPECIFIED FOR AN EXIT LINK
MAXIMUM NUMBER OF DOWNSTREAM LINKS EXCEEDED
MAXIMUM NUMBER OF ITEMS EXCEEDED
MAXIMUM NUMBER OF SOFT DETECTORS EXCEEDED
MAXIMUM NUMBER OF STAGES EXCEEDED
MINIMUM CYCLE TIME EXCEEDS MAXIMUM
MINIMUM CYCLE TIME LESS THAN OR EQUAL TO CYCLIC FIXED
TIME

The minimum cycle time is less than the fixed time defined for this node. The minimum cycle time is calculated as the sum of the minimum stages lengths + 4. If this is less than 32, it is set to 32.

MISSING PARAMETER
NO CAR PARKS HAVE BEEN ASSIGNED TO THE CAR PARK SIGN
NO LINKS DEFINED ON THIS NODE
NO LINK STAGE DATA FOR LINK
NO REGION DEFINED FOR THIS NODE
Node data has been found without a region.
NO STAGE DATA FOUND FOR JUNCTION
NODE HAS LESS THAN 2 STAGES
NODE MAXIMUM LESS THAN INITIAL REGION CYCLE TIME
NODE MINIMUM TOO LARGE FOR DOUBLE CYCLING
NOT ENOUGH OF STAGES ON JUNCTION
NO UP LINKS DEFINED ON THIS NODE
NUMBER OF SOFT DETECTORS ON LINK EXCEEDS 3
ONLY ONE NORMAL LINK (EXIT PELICAN?)
REMOVABLE STAGE DATA MISSING FOR NODE
REPLY BIT IN CONTROL BIT DEFINITION

A reply bit mnemonic has been found in the definition of control word.

SCN/IRN CONVERSION ERROR

The SCN is not defined in the SCN to IRN conversion file.

SOFT DETECTOR DOES NOT EXIST
STAGE CHANGE TIMES ARE NOT CYCLIC
STAGE GREENS NOT APPLICABLE TO PELICANS
THIS DIVERSION TYPE HAS ALREADY BEEN ALLOCATED IN THIS
GROUP

TIMINGS DATA IS NOT SENSIBLE (ALL ZERO)

TOO MANY INTERGREENS ON STAGE

Too many intergreens have been defined for this stage.

TOO MANY STAGES ON CYCLE

The maximum number of stages in the fallback cycle is (Number of Stages+2).

UTC STAGE DOES NOT EXIST

WRONG NUMBER OF STAGES

The junction has the wrong number of stages defined. The number of stages is determined from the values in the intersection description.

Appendix A - SCREENS USED BY THE DATA PREPARATION PROGRAM

<u>COMPUTER DEFINITION (equipment type H)</u>	
SCN	Description
[001000]	[TCC A]
[]	[]
[]	[]
[]	[]
[]	[]
[]	[]
[]	[]
[]	[]
[]	[]
[]	[]
Record : [000000]	[]

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

Figure 1 - Computer Definition Screen

<u>IC12 COMPUTER DEFINITION (Equipment Type E)</u>			
SCN : E[001001]	Description : [TC12 PC No 1]	Modems : [16]	Computer : [A]
	Local Digital IO Type : [12]	Hardware Offset : [0]	
	Wall Map Time Signal : [N]	Monitor Panel : [N]	
<u>IC12 PC Port Definitions</u>			
Modem No	Duplex Mode (H/F)	Type (R/M)	Speed (300/600/1200)
1-4	F	M	1200
Record : [00]	[]	[]	[0000]

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

Figure 2 - TC12 PC Definition

TC8 OUTSTATION DATA			
SUB AREA :	X[001]	GOE :	[110]
PC SCN :	[001001]	Computer :	TCC[A]
Location :	[LONGLDS CARGO F]		
Valid (Y/N) :	[Y]		
<u>Instation Addresses (up to 4)</u>			
Address 1 :	[001]		
Address 2 :	[002]		
Address 3 :	[003]		
Address 4 :	[000]		
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 3 - TC8 OTU Screen

TC12 OUTSTATION DATA							
Outstation SCN : [000000]							
PC SCN : [001001] Modem No : [02] Duplex : [F] Type : [M] Speed : [1200]							
Address	SCN	Location	Valid	CONTROL BYTES (0 - 3)	REPLY BYTES (0 - 14)	UP-DOWN LOAD TYPE (N,I,F,S)	
01	010110	BITTERNE-BULLAR	Y	2	06	N	
02	010210	NORTHM-BRITANIA	Y	2	05	N	
03	010230	BITTERNE-WHARF	Y	1	05	N	
04	010220	NORTHAM-PRINCES	Y	1	05	N	
RECORD [00] [000000] [] [Y] [0] [00] [N]							
NUMBER OF CONTROL AND REPLY BYTES UNUSED : [30]							
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN							

Figure 4 - TC12 OTU

SCN	Location	Valid	Hostname or IP address	MIB (S/P)	CONTROL BYTES	REPLY BYTES
033110	North St	Y	10.2.1.1	S	2	06
033120	Yonder St	Y	10.2.1.2	S	2	06
033130	Mill St	Y	10.2.1.3	S	2	06
033140	Tip Hill	Y	10.2.1.4	S	2	06
033150	Longdogs Lane	Y	10.2.1.5	S	2	06

[000000][] [Y] [] [S] [2] [06]

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

Figure 5 – UTMC OTU

Equipment Type : [] Control word or reply word (C/R) : []

Format <----- Bit Mnemonics ----->

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

000

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

Figure 6 - Equipment Word Formats

JUNCTION INFORMATION			
SUBAREA : J[003]	GOE : [111]	TCC[A]	IRN : [015]
Location : [Avenue-Burgess]		Controller Type	: []
Outstation SCN	: X[003110]	Outstation data word	: [1]
Signal Stuck Inhibit (Y/N)	: [Y]	Link List Number (0-99)	: [004]
Slave Controller (Y/N)	: [N]	SL Bit meaning (0/1)	: [1]
Format Type (1-100)	: [024]	Number of Stages (2-8)	: [4]
F1/G1 Bit Position (0-14)	: [00]	Data Bit Position (0-15)	: [04]
RTC Synchronisation Time	: [1200]	Group Timer (Y/N) ?	: [N]
Secondary Test Stage 1st/2nd	: [][]	Fallback Time or NSBT or NSNT	: [NSBT]
Fallback Time Begins (secs)	: [000]	Test Flag (0-2)	: [1]
Delay to intergreen (0-31)	: [04]	Day of Week Checking	: [N]
Smooth Plan Updates (Y/N)	: [N]	HC suspend checks time (secs)	: [240]
Road Greens	Main : []	Side : []	
Max Green Cyclic Check Sequence	[ABCD]		
Cyclic Check Sequence	: [ABCD]		
Non Cyclic Check Sequence	: [AC]		

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

Figure 7 - Junction Data

JUNCTION STAGE INFORMATION											
(NOTE : Junction Intergreen Timings array has been transposed)											
SUB AREA : J[004]		GOE : [151]		TCC[A]		Location : [ALBERT GRANGE]					
UPPER/LOWER TIMINGS (U/L) : [L]											
Stage	Demand	Minimum Time (0-68)	Maximum Time (0-127)	Intergreen from stage in left hand column to stage here (X = illegal transition)							
	Dependent			A	B	C	D	E	F	G	H
A	N	08	028	X	006	005	005				
B	Y	08	008	006	X	005	005				
C	N	08	020	009	009	X	005				
D	Y	08	016	009	009	005	X				

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

Figure 8 - Junction Timings

```

X DBAS
PELICAN DATA

SUB AREA : P[000]   GOE : [000]   Computer : TCC[ ]   IRN : [000]

Location : [        ]

Outstation SCN           : [000000]
Outstation data word     : [1]
Data format type (1-100) : [000]
Outstation bit position (0-15) : [99]
Lower not green to vehicles time (0-63) : [000]
Upper not green to vehicles time (LNotGX-63): [000]
Lower Pedestrian Green time (0-63) : [000]
Upper Pedestrian Green time (LPedGrn-63) : [000]
Minimum green to vehicles time (0-127) : [000]
Linked list number (0-99) : [000]
Slave Controller (Y/N) : [N]
RTC Synchronisation time : [1200] Day of week checking : [N]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

```

Figure 9 - Pelican Data

```

File Edit Commands Options Print Help
PLAN TYPES DATA

Plan Number (0-40) Plan Type (0-1)
20 0
21 0
22 0
23 0
24 0
25 0
26 0
27 0
28 0
29 0
30 0

Current record : [00] [0]

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

```

Figure 10 - Plan Types Data


```

DBAS
COUNTING DETECTOR DATA
SUB AREA : D[000]      GOE : [000]      Computer : TCC[ ]      IRN : [000]

Location : [           ]      Format Type (0-9)      : [00]
Outstation SCN      : [000000]      Outstation Data Word      : [1]
Tram Detector Bits (1-5)      : [0]      Outstation Bit Position      : [00]
DF Bit Position (0-15,99,XX) : [99]      VL Bit Present (Y/N)      : [N]
Scale Factor (0-128)      : [000]      1 Minute Threshold (0-99) : [99]
Up/Down Threshold (0-9)      : [9]      Car Park Indicator (0-5)   : [0]
                                   Car Park SCN      : C[0000000]

Car Park Queueing Time
1 Upper Limit [000] Time : [000]      2 Upper Limit [000] Time : [000]
3 Upper Limit [000] Time : [000]      4 Upper Limit [100] Time : [000]

Occupancy Detector Data Only      RMS Link Data Only
Up Threshold (0-99)      : [00]      OMU SCN      : Y[0000000]
Down Threshold (0-UT)      : [00]      Detector Number (1-64) : [00]
Smoothing Factor (0-99%) : [00]      Data Position (1-16)   : [00]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

```

Figure 11 - Count Detector Data

```

QUEUE DETECTOR DATA
SUB AREA Q[000]  GOE : [000]  Computer : TCC[ ]  IRN : [000]

Location : [ ]
Outstation SCN : [000000]
Outstation data word : [1]
Group Number (0-10) : [00]
Delay from queue clear to message output (2-127 sec) : [000]
Outstation Bit Position : [00]

QUEUE DETECTOR PLAN ALARM INHIBIT

Plan      Plan      Plan      Plan      Plan      Plan
01 : [N]  06 : [N]  11 : [N]  16 : [N]  21 : [N]  26 : [N]
02 : [N]  07 : [N]  12 : [N]  17 : [N]  22 : [N]  27 : [N]
03 : [N]  08 : [N]  13 : [N]  18 : [N]  23 : [N]  28 : [N]
04 : [N]  09 : [N]  14 : [N]  19 : [N]  24 : [N]  29 : [N]
05 : [N]  10 : [N]  15 : [N]  20 : [N]  25 : [N]  30 : [N]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

```

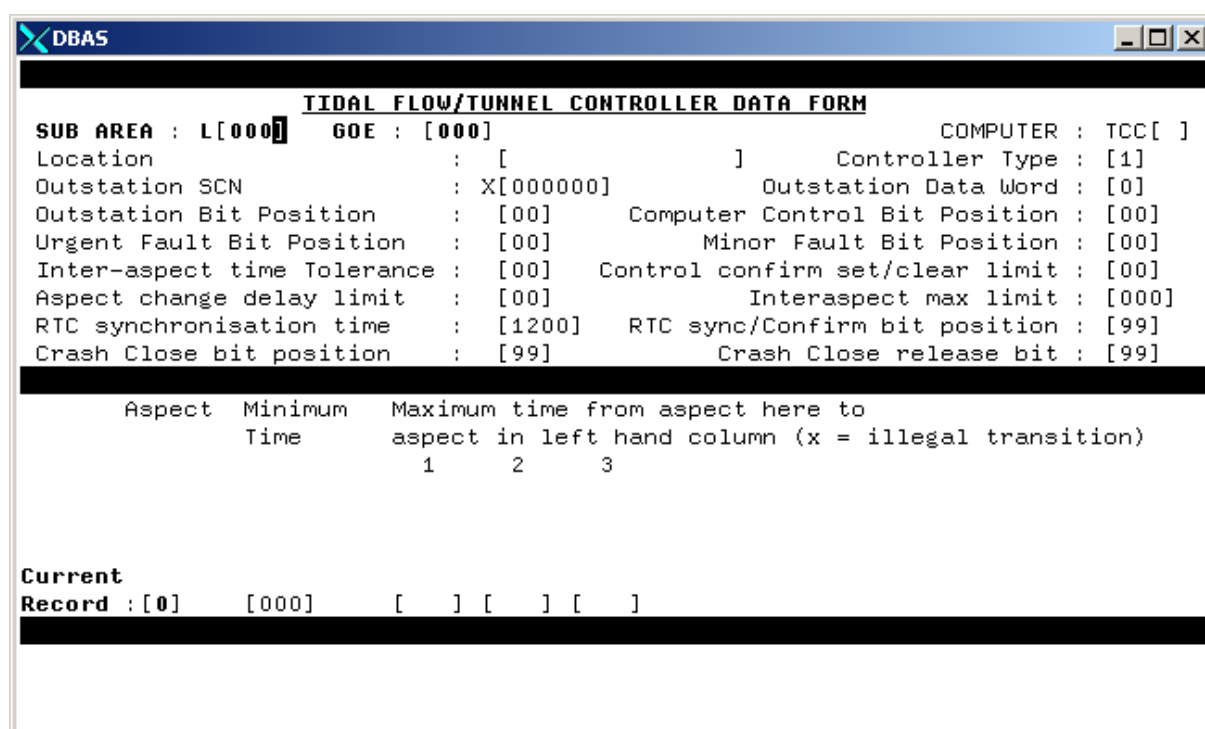
Figure 12 - Queue Detector Data

SPECIAL FACILITY DATA			
SUB AREA :	F[002]	GOE :	[191]
		Computer :	TCC[A]
		IRN :	[001]
Location	:	[FIRE STATION]	
Type (1/2)	:	[1]	
RR Bit Present (Y/N)	:	[N]	
Outstation SCN	:	[002190]	
Outstation data word	:	[1]	
Confirm Bit Present (Y/N)	:	[N]	
Outstation Bit Position (0-15)	:	[00]	
Link List Number (0-99)	:	[00]	
Link List Master ? (Y/N)	:	[N]	
Type 2 (Enable by Plan) Special Facilities			
Junction/Pelican (J/P)	:	[]	SCN : [000000]
Enable by Plan	:	[]	
Enable by Translation Plan	:	[]	
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 13 - Special Facility Data

GREEN WAVE DATA				
Green Wave SCN	Description	IRN	TCC	
002191	FIRE 1 BLUE	001	A	
002192	FIRE 2 RED	002	A	
002193	FIRE 3 ORANGE	003	A	
002194	FIRE 4 GREEN	004	A	
002195	FIRE 5 YELLOW	005	A	
002196	FIRE 6 BLACK	006	A	
Current record: 6[000000] [] [000] []				
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN				

Figure 14 - Green Wave Data



TIDAL FLOW/TUNNEL CONTROLLER DATA FORM

SUB AREA : L[000] GOE : [000] COMPUTER : TCC[]

Location : [] Controller Type : [1]

Outstation SCN : X[000000] Outstation Data Word : [0]

Outstation Bit Position : [00] Computer Control Bit Position : [00]

Urgent Fault Bit Position : [00] Minor Fault Bit Position : [00]

Inter-aspect time Tolerance : [00] Control confirm set/clear limit : [00]

Aspect change delay limit : [00] Interaspect max limit : [000]

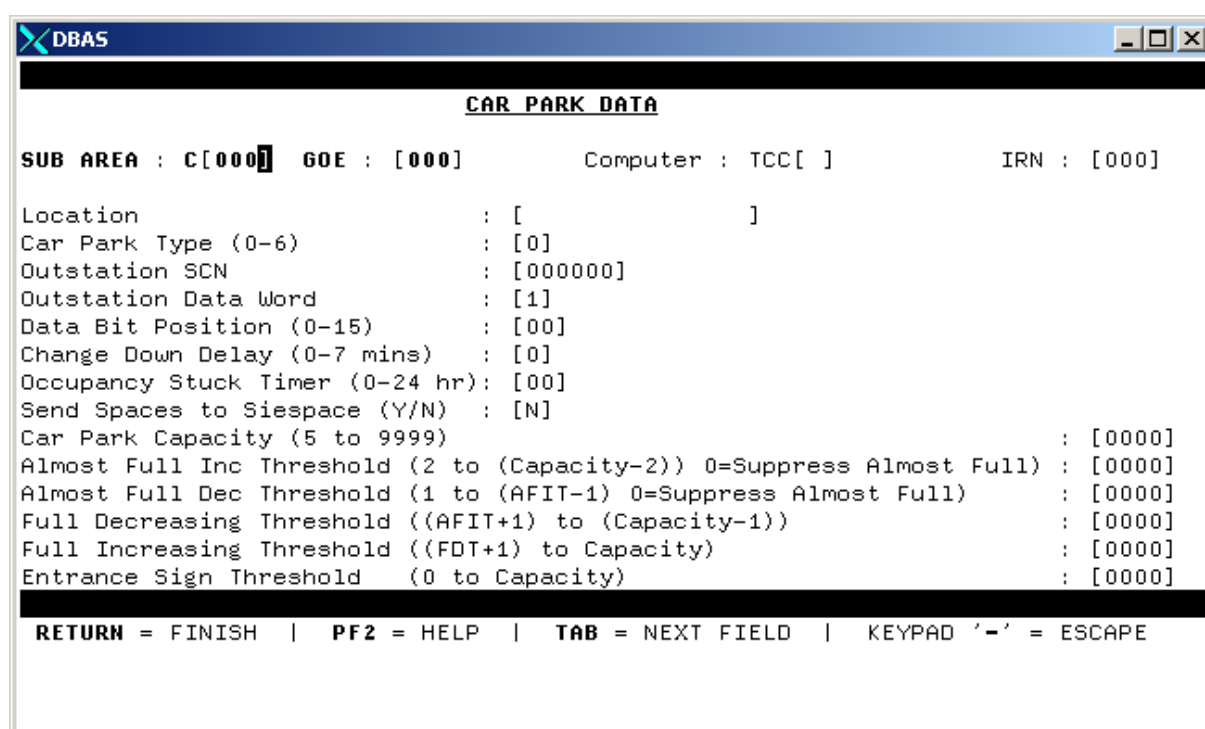
RTC synchronisation time : [1200] RTC sync/Confirm bit position : [99]

Crash Close bit position : [99] Crash Close release bit : [99]

Aspect	Minimum Time	Maximum time from aspect here to aspect in left hand column (x = illegal transition)
	1	2 3

Current Record : [0] [000] [] [] [] []

Figure 15 - Tidal Flow Data



CAR PARK DATA

SUB AREA : C[000] GOE : [000] Computer : TCC[] IRN : [000]

Location : []

Car Park Type (0-6) : [0]

Outstation SCN : [000000]

Outstation Data Word : [1]

Data Bit Position (0-15) : [00]

Change Down Delay (0-7 mins) : [0]

Occupancy Stuck Timer (0-24 hr) : [00]

Send Spaces to Siespace (Y/N) : [N]

Car Park Capacity (5 to 9999) : [0000]

Almost Full Inc Threshold (2 to (Capacity-2)) 0=Suppress Almost Full : [0000]

Almost Full Dec Threshold (1 to (AFIT-1)) 0=Suppress Almost Full : [0000]

Full Decreasing Threshold ((AFIT+1) to (Capacity-1)) : [0000]

Full Increasing Threshold ((FDT+1) to Capacity) : [0000]

Entrance Sign Threshold (0 to Capacity) : [0000]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

Figure 16 - Car Park Data

CAR PARK SIGN DATA			
SUB AREA : S[005]	GOE : [211]	Computer : TCC[A]	IRN : [001]
Location : [ALB RD CP SGN 1]	Sign Type (1-4) :	[2]	
No of Control Bits : [2]	SL Bit Available (Y/N) :	[N]	
SM Bit Available (Y/N) : [N]	Outstation SCN :	[005210]	
Outstation data word : [1]	Reply Indicator (Y/N) :	[Y]	
Data Bit Number (0-15) : [00]	No of Control Groups :	[1]	
Change Down Delay (0-7): [1]	SO Bit Available/Position :	[N][00]	
CAR PARK ALLOCATION			
Group Car Parks in Group			
1	C[05141]	C[00000]	C[00000]
	C[00000]	C[00000]	C[00000]
	C[00000]	C[00000]	C[00000]
	C[00000]	C[00000]	C[00000]
	C[00000]	C[00000]	C[00000]
	C[00000]	C[00000]	C[00000]
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN			

Figure 17 - Car Park Sign Data

ANALOGUE SENSOR DATA			
SUB AREA : W[040]	GOE : [192]	Computer : TCC[A]	
Location : [RPMTest NO2]	Type : [NO2]	Units : [ppb]	
Outstation SCN :	[040190]		
Outstation Data Word :	[1]		
Outstation Bit Position (0 or 8) :	[0]		
Sensor Channel Number (1-15) :	[02]		
Status Channel Indicator (0-3) :	[0]		
Alarm On Threshold :	[0] ppb		
Alarm Off Threshold :	[0] ppb		
Calibration			
Sensor output (low) :	[0001] value : [-555] ppb		
Sensor output (high) :	[1023] value : [2000] ppb		
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN			

Figure 18 - Analogue Sensor Data

```

DIVERSION SIGN DATA

SUB AREA : U[010]    GOE : [362]                Computer : TCC[A]    IRN : [007]

Location              : [Kathleen Advan ]
Diversion sign type (1-3) : [1]   Number of control bits(1-8) [1]
Outstation SCN        : [010360]
Outstation data word  : [1]
Data Bit Number (0-15) : [06]
SO Bit Available (Y/N) : [N]
SO Bit Position       : [00]

Inhibit check flag (Y/N) : [N]
Type 1 data
Sign Essential Flag (Y/N) : [N]
Diversion Sign Group Number (1-3) : [1]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE
  
```

Figure 19 - Diversion Sign Data

DIVERSION SIGN ASPECT DATA			
SUB AREA	: U[000]	GOE : [000]	Computer : TCC[] IRN : [000]
Location	: []		
DIVERSION SIGN LIST DATA			
Bit Pattern		Text string	
Current Aspect : [000] []			
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD'-'=QUIT PREV/NEXT=SCROLL UP/DOWN			

Figure 20 - Diversion Sign Aspect Data

DIVERSION DATA			
SUB AREA	: U[016]	GOE : [111]	Computer : TCC[A]
Location	: [DIV ROUTE 1]	Group (0-3)	: [0]
Type (0-3)	: [0]	Delay (0-15)	: [00]
DIVERSION SIGN LIST DATA			
Sign location	SCN		
HIGH ST YARM LN	016111		
high st	016113		
HIGH ST CHURCH	016125		
Current Diversion Sign : V[000000]			
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN			
Diversion sign list : I Insert, D Delete, F Finish Make a Choice			

Figure 21 - Diversion Data

DIVERSION DATA					
SUB AREA	: U[016]	GOE : [111]	Computer	: TCC[A]	
Location	: [DIV ROUTE 1]	Type	: [0]		
DIVERSION SIGN LIST DATA					
SCN	Sign location	TCC	Delay (0-999)	aspect (0-254)	necessary (0/1)
Current Diversion Sign : V[000000] [000] [000] [0]					
RETURN=FINISH PF2=HELP TAB=NEXT KEYPAD '-'=QUIT PREV/NEXT=SCROLL UP/DOWN					

Figure 22 - Ripple Diversion Sign Data

PLAN DIVERSION RULE TABLE			
Diversion Group (1-3) : [1]		Sub Area : [000]	
Computer : TCC[]			
State (1-7)	Plan for day sector 1 AM peak period (0-30)	Plan for day sector 2 PM peak period (0-30)	Plan for day sector 3 OFF peak period (0-30)
0	00	00	00
0	00	00	00
0	00	00	00
0	00	00	00
0	00	00	00
0	00	00	00
0	00	00	00
0	00	00	00
Current Record :-			
[0]	[00]	[00]	[00]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 23 - Plan Diversion Rule Data

DIVERSION DAY SECTORS DATA				
Traffic Control Computer : TCC[A]				
Day (MO-SU)	AM Peak Time Start (0000-2359)	AM Peak Time End (0000-2359)	PM Peak Time Start (0000-2359)	PM Peak Time End (0000-2359)
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
	0000	0000	0000	0000
Current Record :-				
[]	[0000]	[0000]	[0000]	[0000]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE				

Figure 24 - Diversion Day Sectors Data

<u>DIVERSION PLAN DELAY SWITCHING TIMETABLES</u>		
Traffic Control Computer : [A] Group Number (1-3) : [0]		
Requested State (1-7)	Cancel Time (0-15) (in 1/2 minutes)	Introduction Time (0-15) (in 1/2 minutes)
Current record :-		
[0]	[00]	[00]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE		

Figure 25 - Diversion Plan Delay Switching Data

DEPENDENT DIVERSION RULE TABLES								
Traffic Control Computer : TCC[A]				Diversion Group (1-3): [0]				
Diversion Type (1-3)	New state (0-7) when current state is:							
	0	1	2	3	4	5	6	7
	(000)	(001)	(010)	(011)	(100)	(101)	(110)	(111)
Current Rec :	0	0	0	0	0	0	0	0
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE								

Figure 26 - Dependent Diversion Rule Data

REMOTE REQUEST DATA	
SUB AREA : Z[007] GOE : [111]	Traffic Control Computer : TCC[A]
Description : [Mounbattn Queue]	
Outstation SCN : X[007110]	Outstation data word : [1]
Reply Bit Position (0-15) : [10]	Remote Request Type (1-10): [04]
<u>Special Facility data only</u>	<u>Diversion data only</u>
Special Facility SCN : F[000000]	Diversion SCN : U[000000]
Subarea or controller SCN : [A][000000]	
Plan number (1-40) : [000]	
Plan Timeout (0-999) : [000]	
Inhibit Timeout (0-999) : [000]	
Run plan whilst remote request present (Y/N): [Y]	
Synchronise plan with master cycle counter (Y/N): [N]	
<u>Green Wave/VIP route data only</u>	<u>Special Emergency Vehicle Only</u>
Green Wave SCN : G[000000]	Outstation SCN : X[000000]
Route Number (1-100) : [000]	Outstation data word (1-4): [1]
Cancel Available (Y/N) : [N]	Data Bit Position (0-15) : [00]
<u>VIP data only</u>	Delay (0-999) : [000]
Maximum convoy length : [000]	Fire Station SCN : F[000000]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE	

Figure 27 - Remote Request Data

USER DEFINED REMOTE REQUEST DATA	
SUB AREA : Z[040] GOE : [181]	Traffic Control Computer : TCC[A]
Description : [Test UDRR]	
Outstation SCN : X[040180]	
Outstation data word : [1]	
Reply Bit Position (0-15) : [09]	Alarm message (Y/N) : [Y]
Start Message : [Test User Defined Remote Request Set]	
Finish Message : [Test User Defined Remote Request Cleared]	
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE	

Figure 28 - User Defined Remote Request Data

REMOTE REQUEST FOG DETECTION DATA			
SUB AREA : Z[000] GOE : [000]		Traffic Control Computer : TCC[]	
Description	: []		
Outstation SCN	: X[000000]	Outstation data word	: [1]
Reply Bit Position (0-15)	: [00]	Fog Detection Delay (1-60):	[00]
Fog Clearance Delay (1-60):	[00]		
		Subarea	
		Affected	
Current Record : [000]			
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 29 - Remote Request Fog Detection Data

AUTOMATIC PLAN SELECTION				
Subarea : [000]		Interval : [000]	Computer : TCC[]	
	<u>Trigger (0/1)</u>	<u>Detector SCNs</u>		
Short Queue Group(S):	[0]	(Q)	000000	000000 000000 000000 000000
Long Queue Group (L):	[0]	(Q)	000000	000000 000000 000000 000000
Occupancy Group (O):	[0]	(D)	000000	000000 000000 000000 000000
Count (vol) Group(V):	[0]	(D)	000000	000000 000000 000000 000000
<u>Priority</u>	<u>Mask</u>	<u>Plan</u>	<u>CASI</u>	
(Low) 1 : []		[00]	[0000]	
2 : []		[00]	[0000]	
3 : []		[00]	[0000]	
4 : []		[00]	[0000]	
5 : []		[00]	[0000]	
(High) 6 : []		[00]	[0000]	
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE				

Figure 30 - APS Data

WALL MAP DATA					
Traffic Control Computer : TCC[A]			Wall Map Word Number (1-192) : [000]		
Equipment Type (J,P,F,D,Q, C,U,V,Z)		SCN	Equipment Type (J,P,F,D,Q, C,U,V,Z)		SCN
Bit Position zero	[]	[000000]	Bit Position eight	[]	[000000]
Bit Position one	[]	[000000]	Bit Position nine	[]	[000000]
Bit Position two	[]	[000000]	Bit Position ten	[]	[000000]
Bit Position three	[]	[000000]	Bit Position eleven	[]	[000000]
Bit Position four	[]	[000000]	Bit Position twelve	[]	[000000]
Bit Position five	[]	[000000]	Bit Position thirteen	[]	[000000]
Bit Position six	[]	[000000]	Bit Position fourteen	[]	[000000]
Bit Position seven	[]	[000000]	Bit Position fifteen	[]	[000000]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE					

Figure 31 - Wall Map Data

SYSTEM WIDE VARIANTS			
<u>File Lifetimes</u>			
OTU monitoring files (2-14)	: [14]	Detector data files (2-30)	: [30]
Detector archive files (2-30)	: [30]	Log archive files (2-30)	: [07]
Detector summary files (2-24)	: [24]	Car Park Occupancy files (2-24)	: [24]
Maximum log OTU time (1-24) : [24]		Log hurry call messages (Y/N) : [Y]	
Controller Checks - Stage Green Tolerance (1-9 seconds) :		[1] [1]	
- Intergreen Tolerance (1-9 seconds)		: [1]	
- Maximum Time to be used (1-19 mins)		: [10]	
Transmission Faults - No reply: Tolerance for 'no reply' (1-3 seconds) :		[3]	
- No reply: Clearance time (3-60 seconds)		: [30]	
- Intermittent: 1 hour tolerance of TX errors (4-99):		[15]	
- Intermittent: 1 hour clearance limit (4-99)		: [15]	
- Persistent: Tolerance for TX errors (4-15)		: [15]	
- Persistent: Clearance/reset time (30-240 seconds)		: [180]	
- SD Bit stuck timeout period (1-24 hours)		: [01]	
Upload/Download	Default transfer mode : [C]	One-in-N rate	: [04]
Maximum response time	Car park signs : [60]	Diversion signs	: [040]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 32 - System Wide Variants Data

DBAS

SCOOT AREA DATA

Area Start Lag (0-15) : [02]

Area End Lag (0-15) : [03]

Link Congestion Colours

No Congestion - Colour : [GREEN]

Light Congestion - Level (1-100) : [020] Colour : [YELLOW]

Medium Congestion - Level (1-100) : [035] Colour : [WHITE]

Heavy Congestion - Level (1-100) : [050] Colour : [MAGENTA]

Faulty - Colour : [RED]

Link Green Colours

Faulty - Colour : [MAGENTA]

RETURN = FINISH | PF2 = HELP | TAB = NEXT FIELD | KEYPAD '-' = ESCAPE

Figure 33 - SCOOT Area Data

SCOOT REGION DATA

Traffic Control Computer : TCC[A]

Region (AA-ZZ)	PC SCN	Initial Region Cycle Time (32-240)
WK	001001	096
WO	001001	096
YO	001001	088
WI	001001	048
RG	001001	060
ST	001001	096
WA	001001	088
SB	001001	096
TL	001001	096
KR	001001	120

Current Region: [1] 000000 000

RETURN=FINISH | PF2=HELP | TAB=NEXT | KEYPAD '-'=QUIT | PREV/NEXT=SCROLL UP/DOWN

Figure 34 - SCOOT Region Data

SCOOT NODE DATA					
SUB AREA: N[012]	NODE NUMBER : [221]	Region: [MA]	TCC[A]	IRN : [001]	
Location: [S.R.W-ASHFORD]		Maximum Cycle Time (32-240) : [120]			
Cyclic Fixed Time (0 or 1-63) : [018]	Initially Double Cycling (Y/N) : [N]				
Initially Forced cycling (Y/N) : [Y]	Named Stage (1-7) : [1]				
1st Removable Stage (0 or 1-7) : [0]	2nd Removable Stage (0 or 1-7) : [0]				
Removable stage [first][second] removed in translation plan (Y/N) :					
1 : [N][N]	2 : [N][N]	3 : [N][N]	4 : [N][N]	5 : [N][N]	6 : [N][N]
SCOOT EQUIPMENT ON NODE DATA					
Equipment type		Equipment SCN			
J		012221			
Current record : [] [000000]					
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE					

Figure 35 - SCOOT Node Data

SCOOT STAGE DATA					
Node : N[012221]		Region: [MA]		Traffic Computer : TCC[A]	
Stage (1-7)	Named(N) Removable(R)	Minimum Stage Length (7-63)	Maximum Stage Length (min-240)	Stage change time (0-240)	
1	N	14	120	000	
2		16	120	032	
3		13	120	059	
Current record : [0] [] [00] [000] [000]					
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE					

Figure 36 - SCOOT Stage Data

SCOOT LINK DATA			
Node : N[003111]	Link : [A]	Region : [SU]	Location : [Avenue-Burgess]
Link Type (N/E/X/F/U) :	[N]	Class (N/B) :	[N]
Stopline Link (Y/N) :	[N]	Stopline Uplink :	N[000000][0]
Upstream Node :	N[003112]	Up Node Thru Stage (1-7) :	[1]
Down Node Thru Stage (0,1-7) :	[1]	Main Downstream Link (0,A-Z) :	[0]
Bottleneck Link :	N[000000][0]	Congestion Link :	N[003111][B]
UTC Equipment SCN :	[J][003111]	UTC Stage Greens (A-H) :	[AB]
Bus Equipment SCN :	[0][000000]	Bus Detector Number :	[00]
Bus TAG Processor SCN :	Z[000000]	Bus TAG Reader ID (0-15) :	[00]
SOFT LINKS			
Link used for SOFT (Y/N) :	[Y]	Detectors used for SOFT	
	Node	Link	Detector
	N[003311]	[S]	[1]
	N[000000]	[0]	[0]
	N[000000]	[0]	[0]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 37 - SCOOT Link Data

SCOOT LINK STAGE DATA					
Node : N[012221]	Link : [A]	Region : [MA]	Location : [S.R.W-ASHFORD]		
Translation Plan (1-6)	Greens (1-2)	<----- FIRST -----> Start stage	End stage	<----- SECOND -----> Start stage	End stage
1	1	2	3		
[0]	[0]	[0]	[0]	[0]	[0]
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE					

Figure 38 - SCOOT Link Stage Data

SCOOT DETECTOR DATA			
Node: N[014121] Link (A-Z): [D] Region: [WK] Location: [A320/LOCKFIELD]			
Detector Suffix (1-9)	Outstation SCN	Outstation data word	Mask Number (0-3)
1	014270	3	0
2	014270	3	1
[0] X[000000] 0 0			
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE			

Figure 39 - SCOOT Detector Data

SCOOT STAGE SKIPPING DATA									
Node : N[000000]		Region: []				Traffic Computer : TCC[]			
Stage (1-7)	Translation Plan	Allow Stage Skipping (Y/N) to Stage:							
		1	2	3	4	5	6	7	
Current record: [0] 001									
RETURN = FINISH PF2 = HELP TAB = NEXT FIELD KEYPAD '-' = ESCAPE									

Figure 39 - SCOOT Stage Skipping Data

Appendix B - HTML DBAS Example Screens

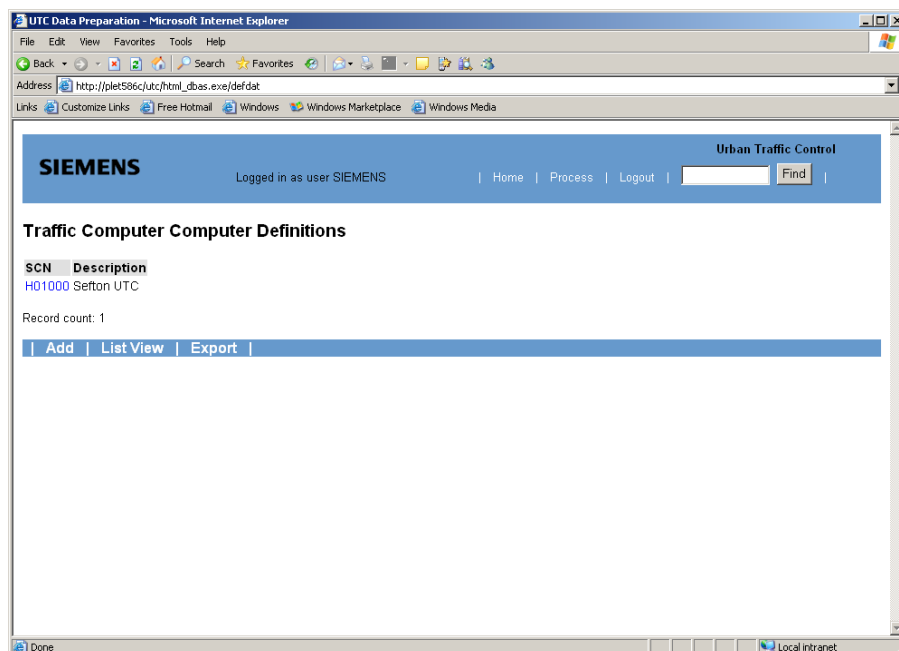


Figure 40 – Traffic Computer Definition

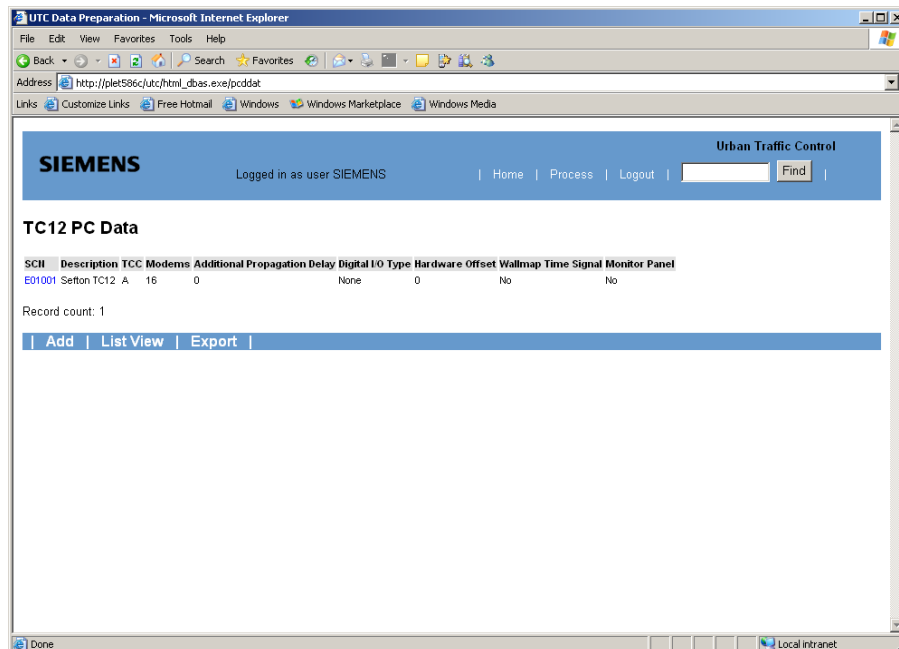


Figure 41 - TC12 PC Definition

SIEMENS Logged in as user SIEMENS | Home | Process | Logout | Find

TC12 PC Data

SCN: [E01001] Description: [Selton TC12] TCC: [A]

Modems: [16] Additional Propagation Delay: [0] Digital I/O Type: ☐ None ☐ TC8 ☐ TC12

Hardware Offset: [0] Wallmap Time Signal: ☐ Monitor Panel: ☐

Save Changes

Delete | Reload | << | < | > | >> | Add | List View | Export

TC12 Modem Group Configuration

Modem Group	Speed	Duplex	Type
1-4	1200 bps	Full Duplex	Multipoint
5-8	1200 bps	Full Duplex	Multipoint
9-12	1200 bps	Full Duplex	Multipoint
13-16	1200 bps	Full Duplex	Multipoint

Record count: 4

List View | Export

Figure 42 - TC12 PC Data

SIEMENS Logged in as user SIEMENS | Home | Process | Logout | Find

Subarea Definitions

SCN	Description	PC	TCC IRN
A01000	SWITCH ISLAND	E01001 A	1
A02000	A5036 DBRIDGE R	E01001 A	2
A03000	A59 AINTREE	E01001 A	3
A04000	GORSEY LANE	E01001 A	4
A05000	A5036 CHURCH RD	E01001 A	5
A06000	NETHERTON WAY	E01001 A	6
A07000	CROSBY SOUTH	E01001 A	7
A08000	CROSBY NORTH	E01001 A	8
A09000	CROSBY THORNTON	E01001 A	9
A10000	BUCKLEY HILL	E01001 A	10
A11000	LINACRE ROAD	E01001 A	11
A12000	MAGHULL SOUTH	E01001 A	12
A13000	MAGHULL NORTH	E01001 A	13
A14000	LYDIATE LANE	E01001 A	14
A15000	STANLEY/BALLIOL	E01001 A	15
A16000	SPORT RD/BREEZE	E01001 A	16
A17000	HAWTHORNE ROAD	E01001 A	17
A18000	STANLEY / MARSH	E01001 A	18
A19000	SOUTHPORT ROAD	E01001 A	19
A20000	SPRT T/CENTRE	E01001 A	20

Figure 43 – Subarea Definition

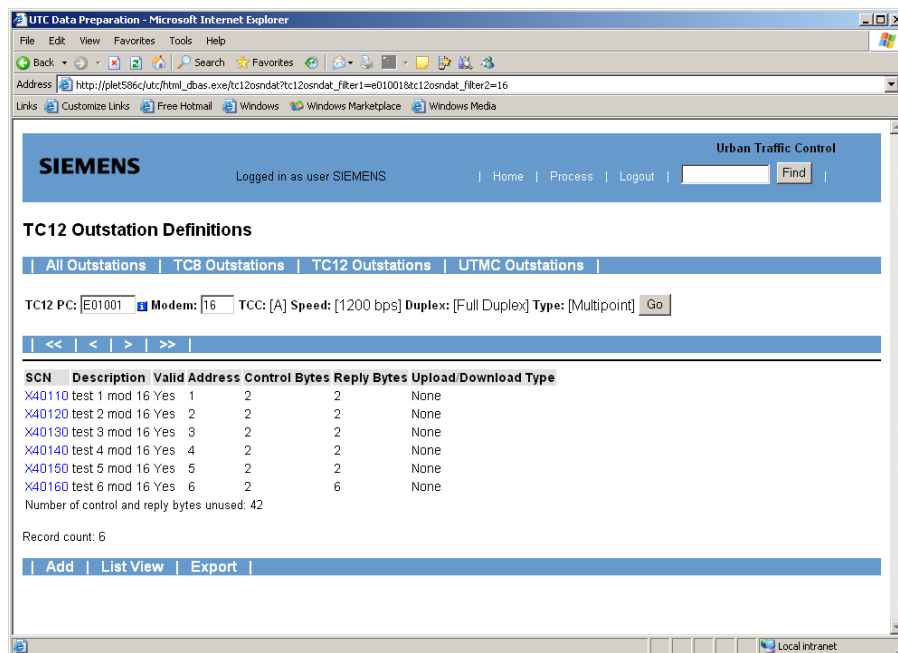


Figure 44 – TC12 Outstation Definitions

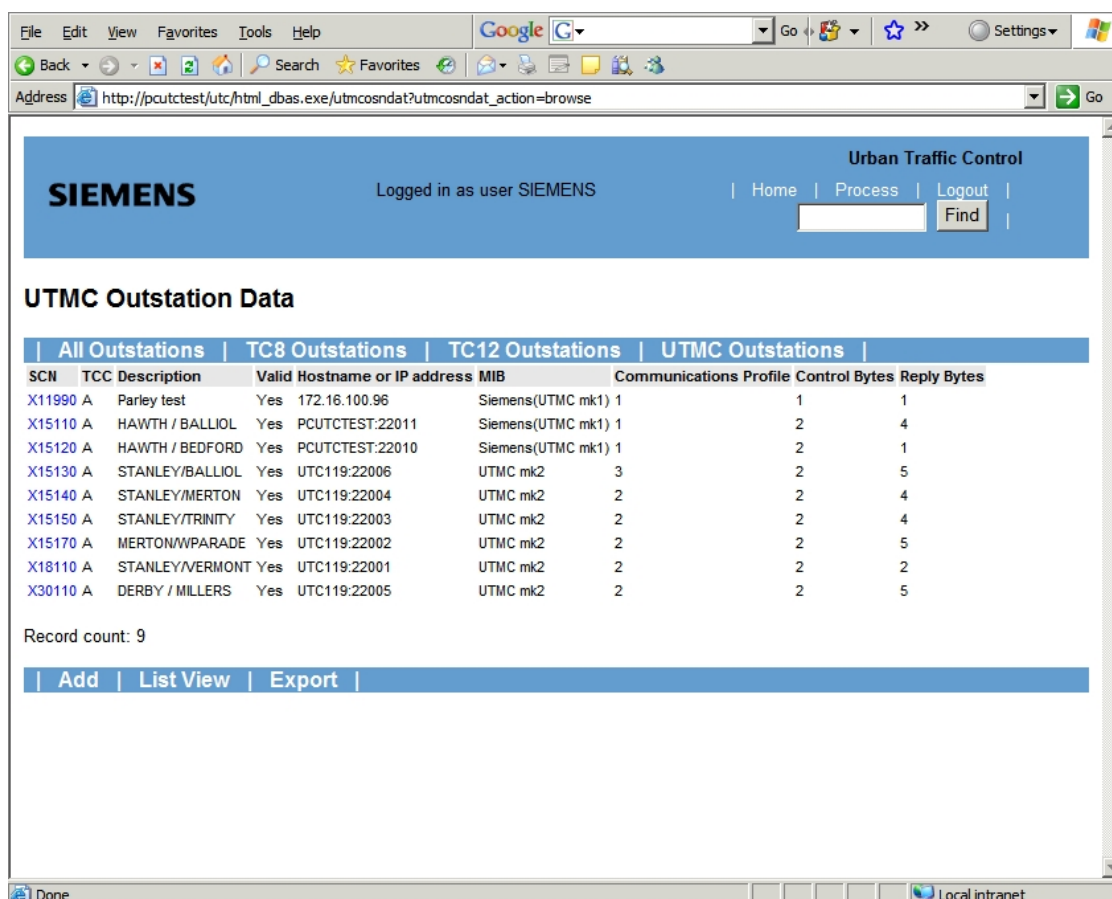


Figure 45 – UTM Outstation Definitions

Figure 46 – UTMC Outstation Data

ID	Profile name	TC8/TC12	UTMC mk1	UTMC mk2	No reply limit	No reply clear	1 hour TX	1 hour TX clear	Persistent TX	Persistent clear	Hour Report Thr	SNMP TO	SNMP Retry	SSRI	Re-send HO	Keep-Alive	Proc TO	Late Time	Op mode TO	Pre-Sched
1	TC8/TC12/UTMC1	Yes	Yes	No	3	30	15	15	15	180	1	0	0	1	1	1	30	2	30	4
2	Private line	No	No	Yes	5	30	15	15	15	180	1	250	2	1	1	1	30	3	30	4
3	Internet	No	No	Yes	6	30	15	15	15	180	1	300	2	2	1	2	30	3	30	4
4	Wireless	No	No	Yes	8	40	20	15	15	180	1	300	2	4	2	4	30	3	30	4
5	Leased Line	No	No	Yes	4	30	15	15	15	180	1	0	0	1	1	1	30	2	30	4

Figure 47 – Communications Profiles definition

File Edit View Favorites Tools Help Google G Settings

Back Search Favorites Go

Address http://localhost/utc/html_dbas.exe/compro?compro_action=edit&compro_index1=2#focus Go

SIEMENS Urban Traffic Control

Logged in as user SIEMENS | Home |
Process | Logout | Find

Communications Profiles

Profile ID: [2] Profile name: Private line

Outstation types this profile is applicable to:
 TC8/TC12: ☐ UTM Mark 1: ☐ UTM Mark 2: ☒

Transmission Faults:

No reply: Tolerance for 'no reply' (1-60 seconds): 5
 No reply: Clearance time (3-3600 seconds): 30
 Intermittent: 1 hour tolerance of TX errors (4-999): 15
 Intermittent: 1 hour clearance limit (4-999): 15
 Persistent: Tolerance for TX errors (4-99): 15
 Persistent: Clearance/reset time (30-3600 seconds): 180
 Hourly Report Threshold (0-99): 1

UTMC Settings:

SNMP Timeout (0-1500ms): 250 SNMP Retry Count (0-5): 2

UTMC Mark 2 Specific Settings:

SCOOT Sample reporting interval (1-8 sec): 1 Resend hold-off interval (1-9 sec): 1
 Keep-alive interval (0-9 sec): 1 Processing timeout (1-30 sec): 30
 Late Message Threshold (1-10 sec): 3 Operating Mode Timeout (5-99 sec): 30
 Maximum Pre-scheduling (0-25 sec): 4

Save Changes

Delete | Reload | << | < | > | >> | Add | List View | Export

Done Local intranet

Figure 48 – Communications Profile data

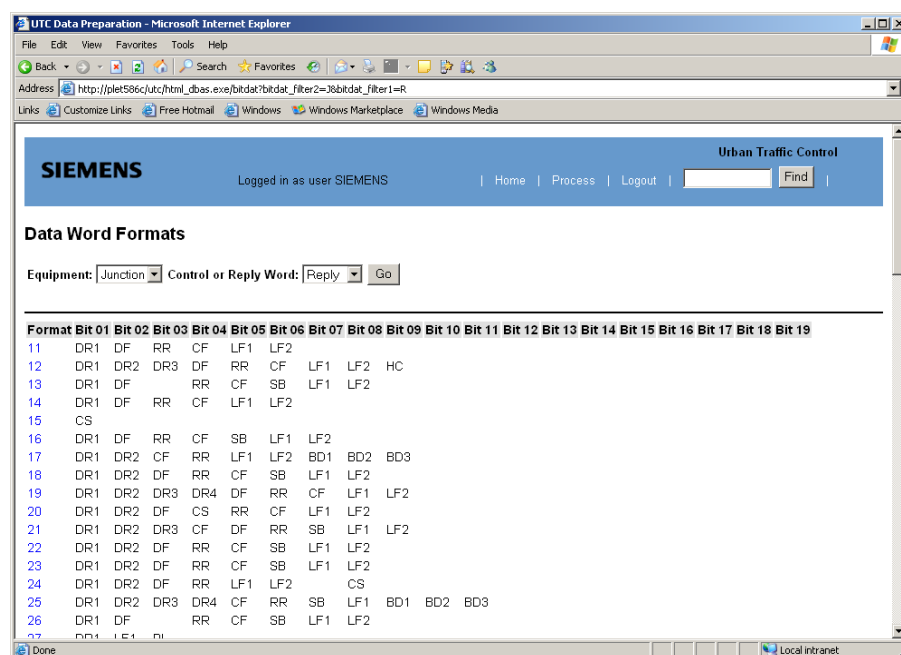


Figure 49 - Data Word Format Definition

SIEMENS Logged in as user SIEMENS | Home | Process | Logout | Find

Junction Controller Data

SCID	TCC	IDN	Description	Controller Type	OTU	OTU Word	Format	#Stages	Stage Pos	Bit Pos	Signals Stuck	Linked List	Slave	SL Sense	Sync Time	SG/SR	Test Stage 1	Test Stage 2	CC Test	Fallback Time Begins	Test Flag	Delay to IG	Check Week
J01111	A	1	SWITCH ISLE NTH	T400	X01110	1	11	2	0	2	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J01121	A	2	SWITCH ISLE STH	ST800	X01120	1	12	4	0	4	Yes	0	No	No	700	No			NSNT	0	0	4	No
J01131	A	3	A59 / M58	T400	X01130	1	13	2	0	2	No	0	No	No	1200	No			NSNT	0	0	4	No
J01141	A	4	SWITCH ISLE M57	ST800	X01140	1	14	2	0	2	No	0	No	No	1200	No			NSNT	0	0	4	No
J01151	A	5	SWITCH CENTRAL	ST800	X01150	1	20	3	0	3	Yes	0	No	No	300	No			NSNT	0	0	4	No
J02111	A	6	A5036 COPY LANE	ST800	X02110	1	21	4	0	4	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J02121	A	7	A5036 HEYSHAM R	T400	X02120	1	22	3	0	3	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J02131	A	8	A5036 PARK LANE	ST800L	X02130	1	23	6	0	6	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J02141	A	9	ATLANTIC COMPLEX	T400	X02140	1	24	3	0	3	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J02211	A	10	A5036 NETHERTON	T400	X02210	1	26	3	0	3	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J03111	A	11	A59 ASDA ACCESS	ST800	X03110	1	31	4	0	4	Yes	0	No	No	1200	No			NSNT	0	0	6	No
J03121	A	12	A59 AINTREE LN	ST800	X03120	1	32	5	0	5	Yes	3	No	No	1200	No			NSNT	0	0	4	No
J03131	A	13	A59 RACE RETAIL	T400	X03130	1	33	5	0	5	Yes	0	No	No	300	No			NSNT	0	0	4	No
J03141	A	14	A59 TOPHAM DV	T400	X03140	1	34	3	0	3	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J03151	A	15	A59 GD NATIONAL	T400	X03150	1	35	5	0	5	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J03161	A	16	A59 PARK LANE	ST800	X03160	1	36	5	0	5	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J03211	A	17	PARK LN DELTIC	ST800	X03210	1	37	4	0	4	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J03221	A	18	PARK LN BRIDLE	ST800	X03220	1	38	4	0	4	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J05111	A	19	A5036 KIRKSTONE	ST800	X05110	1	51	4	0	4	Yes	0	No	No	1200	No			NSNT	0	0	4	No
J05121	A	20	A5036 HAWTHORNE	T400	X05120	1	52	4	0	4	Yes	4	No	No	1200	No			NSNT	0	0	4	No

Figure 50 – Junction Controller Data Listing

UTC Data Preparation - Microsoft Internet Explorer

Address: http://plet586c/utc/html_dbas.exe/jundat?jundat_action=edit&jundat_index1=302141#focus

Logged in as user SIEMENS | Home | Process | Logout | Find

Junction Controller Data

SCN: [J02141] TCC: [A] IRN: [9]

Description: [ATLANTIC COMP] Controller Type: [T400]

Outstation: [X02140] OTU Word: [1] Format Type: [24]

Number of Stages: [3] FA/GA Bit Position: [0] Data Bit Position: [3]

Signals Stuck Inhibit: ☒ Linked List: [0] Slave Controller: ☐

SL Sense: ☐ RTC Synchronisation Time: [1200] Group Timer: ☐

1st Secondary Test Stage: [] 2nd Secondary Test Stage: [] Fallback Time or NSNT or NSBT: [NSNT]

Fallback Time Begins: [0] Test Flag: [0]

Delay to Intergreen: [4] Check Weekday: ☐ Smooth Plan Change: ☒

HC Suspend Checks Time: [240]

Main Greens: []

Side Greens: []

Fallback Sequence: [ABC]

Minimum Green Cyclic Check Sequence: [ABC]

Non-Cyclic Seq: []

Figure 51 – Junction Controller Data

UTC Data Preparation - Microsoft Internet Explorer

Address: http://plet586c/utc/html_dbas.exe/juntim?juntim_action=edit&juntim_index1=302141

Logged in as user SIEMENS | Home | Process | Logout | Find

Junction Timings Data

SCN: [J02141]

Stage	Demand Dependent	Minimum Time	Maximum Time	Intergreen from stage in left hand column to stage here (X = illegal transition)	A	B	C
A	<input type="checkbox"/>	[7]	[75]	[X]	[5-8]	[7-10]	
B	<input checked="" type="checkbox"/>	[7]	[12]	[5-14]	[X]	[5-8]	
C	<input checked="" type="checkbox"/>	[7]	[22]	[6-13]	[7]	[X]	

Save Changes

Delete | Reload | << | < | > | >> | Add | Export

Figure 52 – Junction Timings Data

SIEMENS Logged in as user SIEMENS | Home | Process | Logout | Find

Pelican Controller Data

SCN: [P04131] TCC: [A] IRN: [7]

Description: [GORSEY FORD]

Outstation: [X04130] OTU Word: [1] Format Type: [43]

Outstation Bit Position: [0]

Lower not green to vehicles time: [20] Upper not green to vehicles time: [22]

Minimum pedestrian confirm time: [0] Maximum pedestrian confirm time: [0]

Minimum vehicle green time: [7] Linked List: [0] Slave Controller: ☐

RTC Synchronisation Time: [1200] Check Weekday: ☐

Figure 53 – Pelican Controller Data

SIEMENS Logged in as user SIEMENS | Home | Process | Logout | Find

Count Detector Data

SCN: [D06113] TCC: [A] IRN: [7]

Description: [NETHENRNB C]

Detector Type: [Standard Count]

Outstation: [X06110] OTU Word: [1] Tram Detector Bit: [0]

Data Bit Position: [13] DF Bit Position: [15] Scale Factor: [4]

1 Minute Threshold: [99] Up/Down Threshold: [0] Car Park Detector Type: [None]

Car Park SCN: []

Car Park Queuing Time:

1 Upper Limit: [25]	1 Queue Time: [3]
2 Upper Limit: [40]	2 Queue Time: [10]
3 Upper Limit: [75]	3 Queue Time: [15]
4 Queue Time: [30]	

Occupancy Detector Data:

Up threshold: [0]

Down threshold: [0]

Smoother Factor: [0]

RMS Detector Data:

OMU SCN: []

Detector Number: [0]

Detector Position: [0]

Figure 54 – Count Detector Data

The screenshot shows the 'Queue Detector Data' configuration page in a web browser. The browser window is titled 'UTC Data Preparation - Microsoft Internet Explorer'. The address bar shows the URL: http://blat506c/utc/html_base.exe/queue/dat_action=editqueue.dat_index=Q01122#focus. The page header includes the SIEMENS logo, a login status 'Logged in as user SIEMENS', and navigation links: Home, Process, Logout, and a Find button. The main content area is titled 'Queue Detector Data'. It contains the following fields: SRC: [Q01122], TCC: [A], IRR: [1], Description: [RT TO COPVLAN], Outstation: [Q01120], OTU Word: [], Group Number: [], Delay from queue clear to message output: [5], and Data Bit Position: [13]. There is a 'Save Changes' button. Below the form is a toolbar with buttons: Delete, Reload, <<, <, >, >>, Add, ListView, and Export. The section below the toolbar is titled 'Queue Detector Plan Alarm Inhibit' and contains a grid of checkboxes for Plan 1 through Plan 30. A 'Save Changes' button is at the bottom of this section. The browser's status bar at the bottom indicates 'Local intranet'.

Figure 55 – Queue Detector Data

The screenshot shows the 'Special Facility Data' configuration page in a web browser. The browser window is titled 'UTC Data Preparation - Microsoft Internet Explorer'. The address bar shows the URL: http://blat506c/utc/html_base.exe/special/dat_action=editsspecial.dat_index=Q24111#focus. The page header includes the SIEMENS logo, a login status 'Logged in as user SIEMENS', and navigation links: Home, Process, Logout, and a Find button. The main content area is titled 'Special Facility Data'. It contains the following fields: SRC: [F24111], TCC: [A], IRR: [2], Description: [GREEN WAVE 1], Type: ☒ Normal, ☐ Enable by Plan, RR Bit Present: ☐, Confirm Bit Present: ☐, Outstation: [Q24110], OTU Word: [], Data Bit Position: [13], Link List Number: [], and Link List Master: ☐. There is a 'Save Changes' button. Below the form is a toolbar with buttons: Delete, Reload, <<, <, >, >>, Add, ListView, and Export. The section below the toolbar is titled 'Enable By Plan Data' and contains three input fields: 'Junction or Pelican SRC:', 'Enable by Plan:', and 'Enable by Translation Plan:'. A 'Save Changes' button is at the bottom of this section. The browser's status bar at the bottom indicates 'Local intranet'.

Figure 56 – Special Facility Data

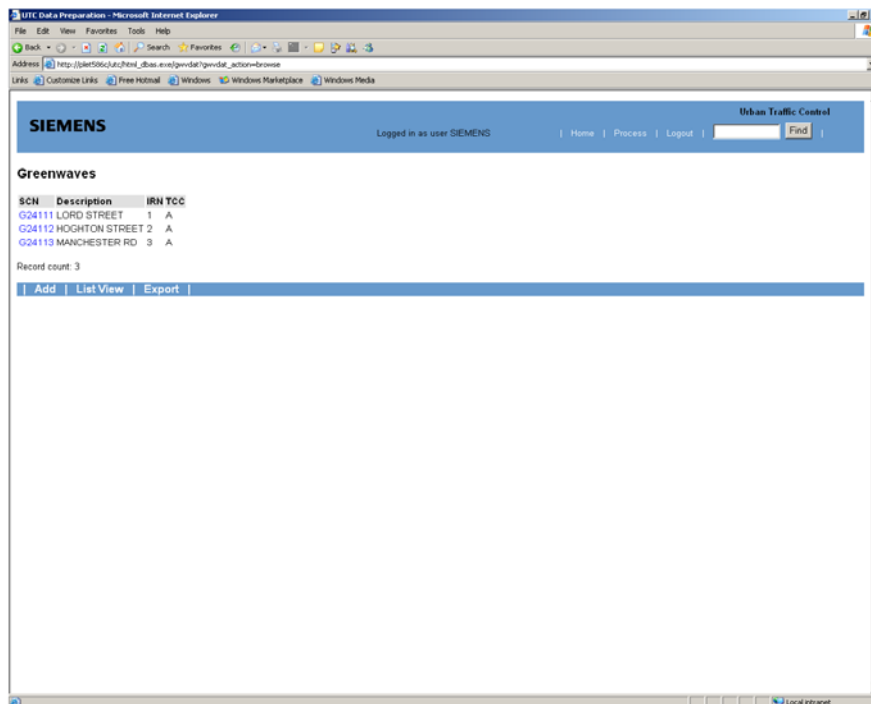


Figure 57 – Greenwave Data

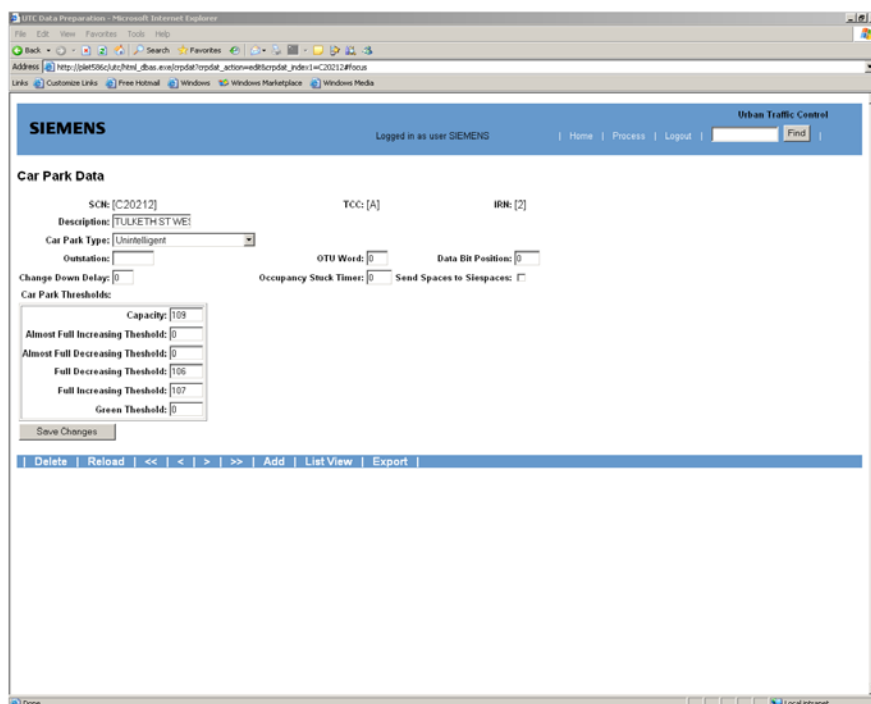


Figure 58 – Car Park Data

The screenshot shows a web browser window titled "UTC Data Preparation - Microsoft Internet Explorer". The address bar shows a URL starting with "http://ip16158c/utc/html_dbas.exe". The page header includes the SIEMENS logo, a login status "Logged in as user SIEMENS", and navigation links: Home, Process, Logout, and a Find button. The main section is titled "Car Park Sign Data". It contains several input fields: SCH: [S20292], TCC: [A], IRN: [2], Description: [MARINE TOP PR], Type: [Named], Number of Control Bits: [2], SL Bit Available: ☐, SM Bit Available: ☐, Outstation: [X20290], OTU Word: [1], Reply Available: ☒, Data Bit Position: [2], No. of Control Groups: [1], and Change Down Delay: [5]. There is a "Save Changes" button. At the bottom, there is a navigation bar with buttons: Delete, Reload, navigation arrows, Add, List View, and Export.

Figure 59 – Car Park Sign Data

The screenshot shows the same web browser window, but the main section is titled "Analogue Sensor Data". It contains several input fields: SCH: [W40161], TCC: [A], Description: [Sens test], Type: [AIRTEMP (Deg C)], Outstation: [X40160], OTU Word: [1], Data Bit Position: [0], Sensor Channel Number: [1], States Channel Indicator: ☐ None, ☐ Mark 1, ☐ Mark 2, ☐ Mark 3, Alarm On Threshold: [80], Alarm Off Threshold: [65], Calibration: Sensor output (low): [] value: [0], Sensor output (high): [1023] value: [100]. There is a "Save Changes" button. At the bottom, there is a navigation bar with buttons: Delete, Reload, navigation arrows, Add, List View, and Export.

Figure 60 – Analogue Sensor Data

The screenshot shows a web browser window titled "UTEC Data Preparation - Microsoft Internet Explorer". The address bar shows a URL starting with "http://ip16158c1utcz.html_dbas.exe/divsdat/divsdat_action=edit_new#focus". The page header includes the SIEMENS logo, "Logged in as user SIEMENS", and navigation links: Home, Process, Logout, and a Find button. The main heading is "Diversion/Variable Message Sign Data". The form contains several input fields: SCN (empty), TCC (empty), IRN (empty), Description (empty), Type (radio buttons for 1 Simple, 2 Ripple Diversion, 3 Siaspace VMS), Number of Control Bits (empty), Outstation (empty), OTU Word (empty), and Data Bit Positions (empty). There is an "Inhibit Checks" checkbox and a "Type 1 Data" section with "Sign Essential" (checked) and "Diversion Sign Group Number" (empty). A "Create" button is at the bottom. A navigation bar at the bottom of the form includes "<< | >> | List View | Export |".

Figure 61 – Diversion/Variable Message Sign Data

The screenshot shows the same web browser window, but the main heading is "Greenwave/VIP route Remote Request Data". There is a sub-header with tabs: Remote Request Data, Remote Plan, Greenwave & VIP, User Defined, Fog, and Other. The form contains input fields for SCN (Z24111), TCC (A), Description (GREENWAVE1), Outstation (P24110), OTU Word (empty), Data Bit Position (13), Greenwave SCN (G24111), and Route Number (empty). There is a "Special Emergency Vehicle Only" section with "Outstation SCN" (empty), "Outstation data word" (empty), "Outstation Bit Position" (empty), and "Delay" (empty). A "Fire Station (Special Facility) SCN" field is set to F24111. A "Save Changes" button is at the bottom. A navigation bar at the bottom of the form includes "Delete | Reload | << | < | > | >> | Add | List View | Export |".

Figure 62 – Remote Request Data

The screenshot shows the 'System Wide Variants' configuration page in the SIEMENS Urban Traffic Control interface. The page is titled 'SIEMENS' and 'Urban Traffic Control'. It includes a navigation bar with 'Home', 'Process', 'Logout', and a 'Find' button. The main content area is divided into several sections:

- File Lifetimes:** Includes input fields for 'OTU Monitoring files (2-14):', 'Detector data files (2-30):', 'Detector archive files (2-30):', 'Log archive files (2-30):', 'Detector summary files (2-24):', and 'Car Park Occupancy files (2-24):'.
- Controller Checks:** Includes input fields for 'Minimum Stage Green Tolerance (1-9 seconds):', 'Maximum Stage Green Tolerance (1-9 seconds):', 'Intergreen Tolerance (1-9 seconds):', and 'Maximum time to be used (1-12 mins):'.
- Transmission Faults:** Includes input fields for 'No reply: Tolerance for 'no reply' (1-3 seconds):', 'No reply: Clearance time (3-60 seconds):', 'Intermittent: 1 hour tolerance of TX errors (4-99):', 'Intermittent: 1 hour clearance limit (4-99):', 'Persistent: Tolerance for TX errors (4-15):', and 'Persistent: Clearance/reset time (0-240 seconds):'.
- Upload/Download:** Includes radio buttons for 'Continuous', 'Split-second', and 'One-in-N', and an input field for 'One-in-N rate: 4'.
- Maximum response time:** Includes input fields for 'Car park signs: 10' and 'Diversion signs: 5'.
- Other:** Includes input fields for 'Maximum log OTU time (1-24):', 'Log busy call messages: [checked]', and 'SD Bit stuck timeout period (1-24 hours):'.

At the bottom of the page, there are 'Save Changes', 'Reload', and 'Export' buttons.

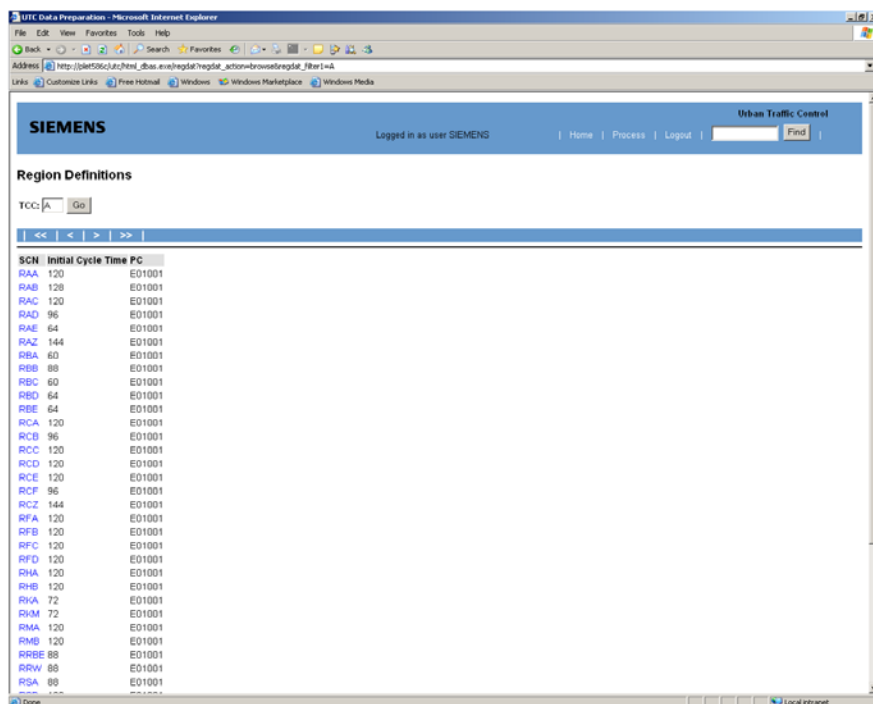
Figure 63 – System Wide Variants Data

The screenshot shows the 'SCOOT Area Data' configuration page in the SIEMENS Urban Traffic Control interface. The page is titled 'SIEMENS' and 'Urban Traffic Control'. It includes a navigation bar with 'Home', 'Process', 'Logout', and a 'Find' button. The main content area is divided into several sections:

- Area Start Lag:** Includes an input field for 'Area Start Lag: 2'.
- Area End Lag:** Includes an input field for 'Area End Lag: 2'.
- Link Congestion:** Includes a table with columns for 'Congestion Level' and 'Colour'.
- Link Green:** Includes an input field for 'Faulty Green Colour: Magenta'.

At the bottom of the page, there are 'Save Changes', 'Reload', and 'Export' buttons.

Figure 64 – SCOOT Area Data



SIEMENS

Logged in as user SIEMENS

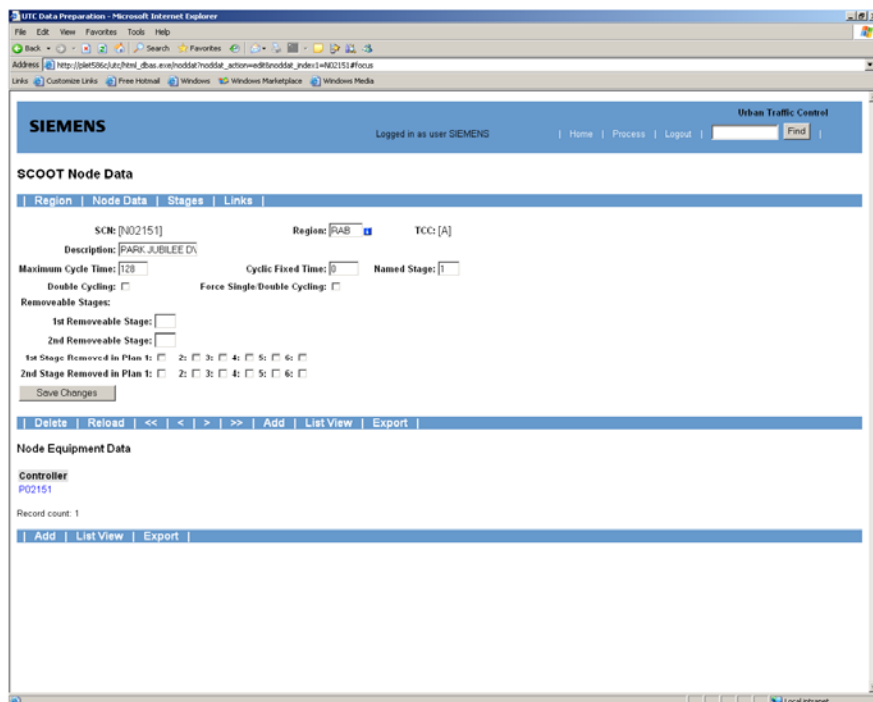
Urban Traffic Control

Region Definitions

TCC: A Go

SCN	Initial Cycle Time	PC
RAA	120	ED1001
RAB	128	ED1001
RAC	120	ED1001
RAD	96	ED1001
RAE	64	ED1001
RAZ	144	ED1001
RBA	60	ED1001
RBB	88	ED1001
RBC	60	ED1001
RBD	64	ED1001
RBE	64	ED1001
RCA	120	ED1001
RCB	96	ED1001
RCC	120	ED1001
RCD	120	ED1001
RCE	120	ED1001
RCF	96	ED1001
RCZ	144	ED1001
RFA	120	ED1001
RFB	120	ED1001
RFC	120	ED1001
RFD	120	ED1001
RFA	120	ED1001
RHB	120	ED1001
RVA	72	ED1001
RVM	72	ED1001
RMA	120	ED1001
RMB	120	ED1001
RMBE	88	ED1001
RRW	88	ED1001
RSA	88	ED1001

Figure 65 – Region Definitions



SIEMENS

Logged in as user SIEMENS

Urban Traffic Control

SCOOT Node Data

Region: RAB TCC: A

SCN: [N02151] Description: [PARK JUBILEE D]

Maximum Cycle Time: [128] Cyclic Fixed Time: [0] Named Stage: [1]

Double Cycling: ☐ Force Single/Double Cycling: ☐

Removeable Stages:

1st Removeable Stage: ☐ 2nd Removeable Stage: ☐

1st Stage Removed in Plan 1: ☐ 2: ☐ 3: ☐ 4: ☐ 5: ☐ 6: ☐

2nd Stage Removed in Plan 1: ☐ 2: ☐ 3: ☐ 4: ☐ 5: ☐ 6: ☐

Save Changes

Delete | Reload | << | < | > | >> | Add | List View | Export

Node Equipment Data

Controller: P02151

Record count: 1

Add | List View | Export

Figure 66 – SCOOT Node Data

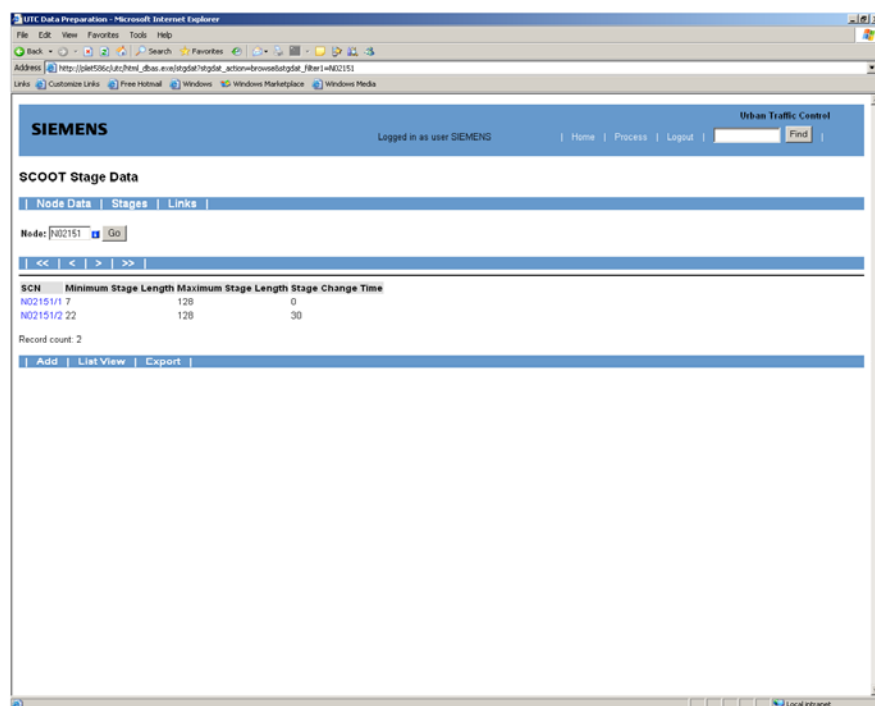


Figure 67 – SCOOT Stage Data

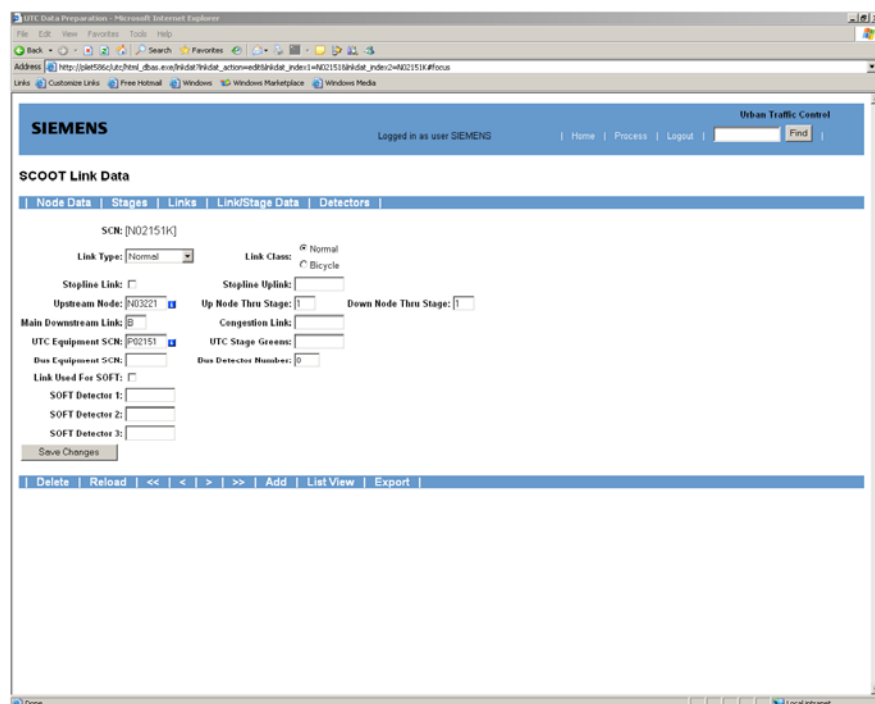
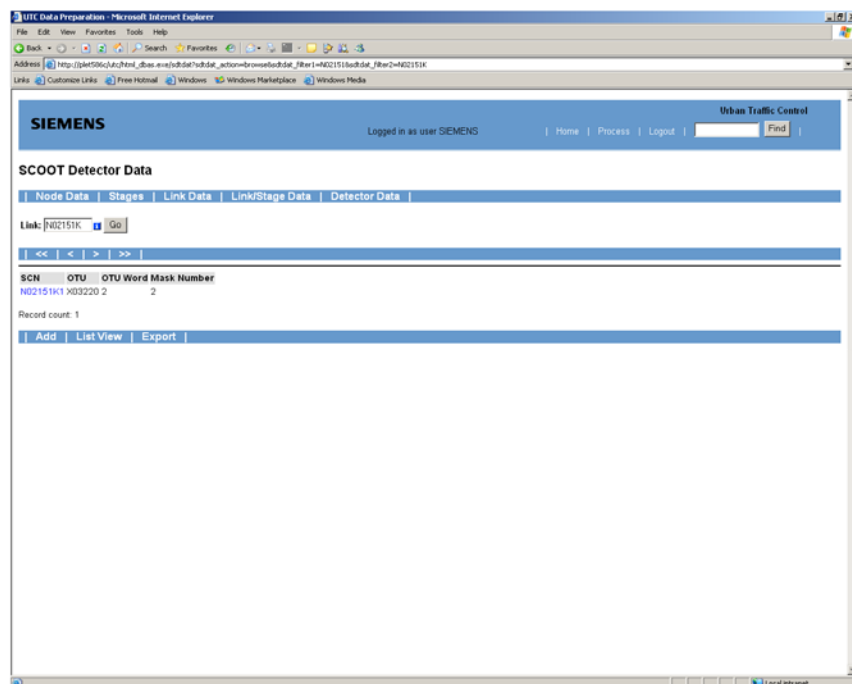


Figure 68 – SCOOT Link Data

**Figure 69 – SCOOT Detector Data**

Appendix C - DATA PREPARATION LISTING INFORMATION OUTPUT

```
SAT 11:37:27 18-JUN-1994 Urban Traffic Control System
Overlaid bit definition listing TCCA -
Multiple equipment defined on bit 10, outstation 3 (X01130)
Equipment P01133 - PV
Equipment P01132 - PV
Multiple equipment defined on bit 12, outstation 3 (X01130)
Equipment P01133 - SO
Equipment P01132 - SO
```

Figure 70- Overlaid OTU Bits

```
SAT 11:37:29 18-JUN-1994 Urban Traffic Control System
Outstation X01110 (Adelaide/May) - Control bytes: 2, Reply bytes: 2
E01001 : Address 1
Control: 1 015 014 013 012 011 010 009 008 007 006 005 004 003 002 001 000
J01111                                     SG SO          F2 F1
Reply : 1 015 014 013 012 011 010 009 008 007 006 005 004 003 002 001 000
J01111                                     GP1 SR LF1 DF      G2 G1
=====
Outstation X01120 (Bedford/Howard) - Control bytes: 2, Reply bytes: 2
E01001 : Address 2
Control: 1 015 014 013 012 011 010 009 008 007 006 005 004 003 002 001 000
J01121                                     SG SO          F4 F3 F2 F1
Reply : 1 015 014 013 012 011 010 009 008 007 006 005 004 003 002 001 000
J01121                                     GP1 SR LF1 DF      G4 G3 G2 G1
N01121F1                                VS1 VS2 VS3 VS4
=====
```

Figure 71 - OTU Equipment Allocation

Appendix D - EXPORT PSEUDO PRINTER SET UP

```
Number 4 (PRINTER)
SCN           - T01005
DESCRIPTION    - Export
PHYSICAL NAME - $EXPORT

BAUD RATE      - 9600
LANGUAGE       - ENGLISH
TYPE           - HARDCOPY
FORM_LENGTH    - 66
UTC_OUTPUT     - NO
SCOOT_OUTPUT   - NO
RMS_OUTPUT     - NO
NARROW_PAPER   - NO
INHIBIT_INQUIRE - NO
LOG_PRINTER    - NO
FAULT_PRINTER  - NO

Press <CR> to continue >
```

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