

SSI Data Preparation Data Style

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I Purpose

This document provides advice on standardisation of style to be adopted in order to ensure a uniform and readily recognisable and understood format for the SSI data source files. The format will enable data to be more easily modified, facilitate checking and testing and minimise error.

2 Scope

The advice provided shall be used as the basis for the laying out and appearance of source data to be used on British railway (Railtrack) infrastructure. The reader's attention is drawn to the fact that this document represents a newly emerging standard, and older examples within the SSI Application Manual may not match the advice given exactly. Where this is so, the design advice given in an example should be followed, modifying the presentation of the data prepared in line with this document. The style and presentation of the int.mod, pan.mod and database word processor modification records and Central Interlocking Status Records (CISR) are dealt with by SSI8505-C and are not further described in this document. Neither are SSI Design Workstation (DWS) simulator picture files covered by this document.

3 Data Presentation

3.1 Data templates provided on SSI Design Workstations

Standard templates giving recommended forms for various parts of the identity and geographic data source files are available in the SSI data preparation environment on a DWS. These templates are included in the files whenever a new Interlocking is created on a DWS with program issue F4 or later. See GS/SI8300, "The SSI Design Workstation User's Guide", part 3, for specific details of the steps necessary to create a new Interlocking. The templates provided with the current DWS software issue, GS/SI 8320 Issue 8 revision A, are up to date with SSI8003 document issues listed in SSI8003-CON Issue C.

The templates are primarily intended for use in the preparation of data files for newly created Interlockings as above. However, the templates can be introduced into existing data files during editing on the DWS. Details of how this is achieved can be found in the "int.mod" file for a newly created Central Interlocking (CI).

3.1.1 Title Blocks

Standard title blocks are provided for each file, these are to be retained in the original form in order to produce a uniform appearance, and to enable easy recognition of standard details. Where data is produced under contract by a commercial company, the company name and address details may be added above the standard information taking care to include the necessary comment delimiters for each line. Where it is not company policy to identify individual SSI source file creators, this information may be omitted. The detailed requirements for company and data producer identification, or any other deviation from the standard title blocks, must be defined in specific instructions or procedures.

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3.1.2 Identity Files

General information on identity naming conventions is given in SSI8003-10C, with further details of restrictions in SSI8003-30, Section 3, and SSI8003-53. Advice contained in SSI8003-10C should be borne in mind to obtain consistency between equipment identifications used in database forms and identities used in Geographical data.

Identities shall use only those characters necessary to clearly convey their intended function, using 8 characters or less if possible. Where long identities, using alpha characters, are unavoidable then they should be split into sections, to aid logical interpretation, using punctuation. The punctuation such as brackets, hyphens, underscores and so on must be kept to a minimum. The latter restriction is particularly important for Integrated Electronic Control Centre (IECC) schemes, where an automatic process removes punctuation in order to minimise the length of IECC identities. Minimising punctuation for SSI identities will result in the closest match between identities in the two systems and thus aid understanding.

In SSI data preparation, the diagnostic data compiler uses the identity files in conjunction with the TFM database to identify standard types of trackside equipment and to correlate these with TFM inputs. This allows it to generate some standard diagnostic messages for the Technician's Terminal. Where the name of the input entered in the TFM database differs from the identity of the state of the railway memory that uses the input, the correlation cannot be performed. In these circumstances, the correct form of diagnostic message will not be prepared for use by the Technician. Also the input will not be identified as a standard equipment type (Signal proving, Track Circuit, point detection, etc.); it will, thus be classed as a miscellaneous input. This has the effect that the input will not be provided with an identity number in the SSI DWS trackside equipment listing. Thus a Technician would be unable to set a control for the equipment without an identity number.

An example to illustrate this would be a combined, split track circuit input to the interlocking from a fringe area. If the identity were to be entered as TAA-1/2 in the SSI track circuits identity file, but the input was identified as TAA1/2 in the TFM data base, then the DWS would be unable to correlate the identity with the input. The input would therefore be classified as miscellaneous. No identity number would be printed in the DWS trackside equipment listing.

The scheme designer and data preparer therefore need to co-operate in ensuring that the TFM data base entry corresponds with the identity in data. This principle extends to labels on location case equipment that can cause confusion if they do not match the TFM schedules. Difficulty arises in checking the location cabinet wiring against the TFM schedule. Generally TFM inputs and outputs merely transfer a control into or out of an SSI, from or to external equipment. The practice of using ascending numbering, commonly applied to successive repeat relays e.g. T1PR, T2PR, T3PR in data base qualifiers and equipment labels relating to an input or output is not always necessary in such instances. The identity, data base entry and

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equipment label just need to use the same name as the equipment or relay attached to it. The qualifier field in the TFM data base entry is used in the equipment label. Thus to continue the above example, if the two section track circuit were combined in a repeat relay TAA-1/2 TPR, the input would be identified as TAA-1/2 with qualifier TPR and identity TAA-1/2. Note that where the track circuit originated from another SSI, the rules for duplicate identities shall be followed. TdAA-1/2 is used as the identity in the destination interlocking. In this case it would be correct that no technician's control could be applied to the duplicate, as this should be done in the source interlocking.

Templates provided for identity files allow for both panel and IECC schemes. Annotations are provided to indicate where identities only apply to one of these types of scheme. When preparing the button and switch (BUT.id) and indication (IND.id) identity files for the panel processor of a panel scheme, the rules for panel multiplex allocations must be followed (see SSI8003-20B, Sections 4.2 and 4.3). For IECC schemes, additional identities and panel data are required for testing on the DWS simulation system (SSI8003-53, Section 7 refers).

Apart from the above restrictions, identities shall be listed under the standard headings in alphanumeric order. This will result in a readily recognisable format which does not vary arbitrarily from scheme to scheme, and will assist in the speed and effectiveness of preparation, checking and testing. Where the standard headings are not required to contain any entries, this shall be indicated by a suitable comment, rather than by deleting the heading. Additional categories may be added for special purposes, and these must include suitable descriptive comments to make their purpose clear to checkers and testers and to other data producers.

Entries in identity files shall be grouped by related function. Where there is more than one identity on a line they must be separated by sufficient white space to make them legible. The spacing chosen shall allow the identities to appear in columns, and the presentation within different files should be uniform, taking different identity lengths into consideration. A practical maximum is eight identities per line, although the format of listings output from the DWS must also be considered.

It should be noted that when adding identities to files which have already been used to produce data, the operation of other equipment such as train describers may be affected by the order of identities and require consequent amendment, see SSI8003-20B, Section 4.1.

In some circumstances, once IECC Signalling Display System (SDS) and Automatic Route Setting (ARS) data has been produced, all identities must remain in the original position, and any additions made to the end of the file. It is best to do this in an organised manner, in a set of groups as for the originals, and clearly indicated with descriptive comments. SSI8003-53, Section 5 gives detailed instructions for this procedure.