

Subsystem Builder

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Amendment Record

Issue	Date	Description
3	29/10/1999	Converted to Word format by AEA Technology Rail. Same as issue 2, except for the correction to the title of the document.
4	25/01/2000	Modified to include information regarding the use of the MVME172 board as a replacement for all existing boards within a subsystem: Section 1 – deleted. Section 1 (old 2) – Add description of text conventions and amend throughout document. Section 3 (old 4) – Delete method of releasing ARS task 9 site-specific data and state it is released in the same way as standard data. Section 4.4 (old 5.4) – Add note to identify need for two login IDs for different hardware configurations. Section 6 (old 7) – Now considers all usable Stag Programmers. Section 6.1 (old 7.1) – Modified to also consider the M27C801 EPROM (used with MVME172 boards). Section 6.2 (old 7.2) – Extensively modified to define use of Stag PP39 and 803 programmers (as well as PP42). Section 6.8.1 (old 7.8.1) – Add in reference to Stag 803 programmer. New section 6.9 – Add section to describe promming differences for the MVME172 board. Section 10 (old 11) – Add references to M27C801 EPROM, MVME172 board, and different hardware configurations.
5	23/5/2001	Amended to cover the CD-ROM facility and its build process. Document reference changed from SAO-SSP(BLD)-UG-2 to SAO-IEC-TG-3.

Author	Approved	Date	Authorised	Date
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I Introduction

This document is intended for use by an IECC *Subsystem Builder* on an IECC *Build Computer* in order to generate an *IECC Subsystem*. It shows how a compatible set of IECC subsystems can be built for a given *Code Configuration*.

A Subsystem Builder can build Subsystems for a number of sites using any Code Configuration. The *System Manager* will already have set up the Build Computer for use as detailed in reference¹. The System Manager will set up the Code Configurations, site login IDs, and perform customisation tasks which will allow Subsystems to be built for a given site using the Code Configuration of your choice.

This document assumes a moderate familiarity with IECC terms and terminology. Details of the Build software are not covered unless it completes the understanding of the Build process.

Terms described in the glossary are shown in *Italic*. Commands to be typed are shown in **Bold** and text requiring a filename or device is shown underlined.

2 Overview of the New Build Procedure

IECC source code is maintained by the *Code Custodian*, using Source Code Control System (SCCS) on a Unix-based computer. The majority of code is common to all IECC sites. However some code for the ARS subsystem, referred to as 'site-specific code', applies to an individual site only. This topic is explained in more detail in section 3.

The *System Manager* receives an *Installation Tape* and *Subsystem Software Tapes* from the *Code Custodian* and restores files from these tapes, including a *Data Compiler* for each subsystem, to the appropriate location on the Build Computer. It is the System Manager's responsibility to ensure that a compatible set of Subsystems are installed for a given Code Configuration. The System Manager then either writes IECC subsystem data and compiles the data using these Data Compilers (i.e. the System Manager is also the *Data Preparer*), or issues the Data Compilers to the Data Preparer. The Data Preparer writes IECC subsystem data, compiles it using the issued Data Compilers and then provides the compiled data to the *Subsystem Builder*. Of course the Subsystem Builder could also be the same person as the System Manager.

The System Manager will set up the site login IDs and perform customisation tasks to enable the Subsystem Builder to build a Subsystem for a specific site using the correct Code Configuration.

If the Subsystem Builder is setting up a site requiring ARS task 9 data, then this will be provided on a tape by the Code Custodian.

The Subsystem Builder will then process the data, and the Subsystem code, using the Build software. *The Build* is in four stages, although the first three are performed from the same menu option in the main Build program '*bldmenu*':

- 1) Releasing the data
- 2) Link-editing the 'released' data to the correct memory addresses
- 3) Generating *S-records* and *Binary files*
- 4) Programming *EPROMs* and creating *CD-ROMs*

This document contains details of these four stages.

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3 Installing ARS Task 9 Site-Specific Data

Certain IECC sites require ARS task 9 site-specific data. This data is issued by the *Code Custodian* and not the *Data Preparers*. It is released to the *Build Computer* in the same way as standard data.

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4 Releasing Data

This section describes how to release data supplied by the Data Compilers. Section 4.1 explains the types of data, and sections 4.2, 4.3 and 4.4 explain how to release data from different storage media. To aid understanding, sections 4.2, 4.3 and 4.4 are written by way of example for the site 'penz', home directory /sites/PENZ and the ARS Subsystem.

4.1 SUBSYSTEM DATA CATEGORIES

Data for each IECC Subsystem is categorised as follows:

	Data Type	Notes
1)	Global data	Subsystem-independent
2)	BRX data	Subsystem-independent
3)	NDS data	(i) Site and Subsystem specific (ii) Site specific but Subsystem independent
4)	RCM data	(i) Site and Subsystem specific (ii) Site specific but Subsystem independent
5)	SSIC data	Site and Subsystem specific
6)	Subsystem application data	

4.2 RELEASING DATA FROM A HARD DISK ON THE BUILD COMPUTER

- 1) Obtain a *Release Note Number* from the Data Preparers, eg 345
- 2) Log in as the site you want to build for, eg 'penz' home directory /sites/PENZ
- 3) Change to the 'HD' directory under the site's home directory, eg '/sites/PENZ/HD'
- 4) Make the Release Note directory under this directory, eg '/sites/PENZ/HD/RN345' for Release Note 345
- 5) Make one or more of the following 'data type' directories under 'sites/PENZ/HD/RN345':
 - i) 'gbl'
 - ii) 'brx'
 - iii) 'nds'
 - iv) 'rcm'
 - v) 'ssic'
 - vi) 'ars' (since our example is for the ARS Subsystem)