FABmaster
CAD Conversion Software

Software integration of design and test to reduce fixture and program time-to-market

The Design Process

The vast majority of today's Printed Circuit Boards (PCBs) are designed on a Computer Aided Design (CAD) workstation. This approach offers a number of significant benefits, for instance the ability to simulate the design and analyse a board layout for any potential conflicts. The result is that design cycle times have been reduced with a corresponding increase in quality.

There are now upwards of thirty different CAD packages in use within the electronics industry, with a matching number of CAD formats in which data is stored.

Manufacturing Links

The CAD files used to describe the design are essential within the manufacturing process. Each of these processes typically requires a subset of the data held within the CAD files, from basic board layout through to component selection and placement.

The test process is no exception. InCircuit and Manufacturing Defects Analysers test each component in turn, taking measurements against a nominal value or truth table. Computer Aided Repair uses a graphical representation of the board to identify component failures. All of the information regarding the type and value of each component, the connectivity and the physical location is contained within the CAD file. The key is accessing the data.

The IFR Solution for Test

Given that there are over thirty different CAD systems in common use today, it is difficult for each platform within the production process to accept the ever changing formats outputed by these systems. The link is an integrated software solution converting and manipulating data for use by each element of the process.

The market leader in this sector is FABmaster™, based in France. IFR use a dedicated version of the software to link to various CAD systems and convert data into a format suitable for the range of Automatic Test Equipment (ATE). This data format is then taken by IFR's Computer Assisted Program Generation Software (CAPG) to produce the fixtures and programs required by the ATEs.

This combination of software offers a number of significant improvements over previous methods. Firstly, it is quicker, achieving a lower time-to-market. Secondly, it is accurate. IFR FABmaster ensures that the data used to manufacture the board is the same data as that used for testing. By improving both time-to-market and quality, test costs are reduced and the effectiveness of the ATE platform is improved.

FABmaster Extensions

The basic IFR FABmaster software can be extended to support other elements of the manufacturing process. The time-to-market and quality benefits that FABmaster brings to the creation of ATE fixtures and programs are also relevant to surface mount and automated placement systems.

Specification

Core IFR Package

IFR .CB FABmaster Station for Windows
(requires Windows 95, NT or 3.1 with Win32 extension)

Includes :
- 1 CAD Input Processor (must be specified from list below)
- FABmaster Graphics Engine
- Job Screen
- ASCII Text Editor
- Attribute Library Management
- HPGL Plot File Output
- Bed of Nails Fixture Design
- IFR .CB Output Processor

CAD Input Processors
ACADEMI
CADENCE ALLEGRO
CADES-G
CADNETIX Versions E & F
CADSTAR for Windows
CALAY VO4
CASE VANGUARD
COMPUTERVISION AUTOBOARD/THEDA
DDE ECAD (IPL format)
DEDALE
DIF (Clink)
DOCICA (Alcatel)
ENCORE PCB (Xynetix)
GENCAD (Mitron)
H.P. PCDS
I.B.M. CBDS Version 4
I.B.M. CBDS Version 5
INTERGRAPH AT Designer (EIF)
MENTOR
ORCAD (DOS)
ORCAD (Windows)
PADS
P-CAD PDIF
PRISMA
PROTEL
REDAC - Cadstar (CDI), Maxi & Redboard
SCICARDS
THEDA - Incases
TOPCAD
ULTIBOARD
UNICAD
VERIBEST (FATF)
VISULA (CADIF)
VUTRAX
ZUKEN CR 3000

Other Options

MRP/BOM Input Setup
HPGL Schematics Viewer
IFR INCITE Output Processor

FABmaster