Introduction

Identifying Silicon Graphics workstations and knowing what kind of interfaces they contain can be a difficult problem. It's the purpose of this document to help in that quest.

This document is organized so that information about the broad range of SGI systems is collected here in one document. Reading through the information from front to back will progress from general information about SGI systems to the more specific information about particular interfaces. Along the way terminology will be defined that will help in identifying systems, options and interfaces available. These definitions are also listed in the Lexicon of Terms.

This document covers all of the "4D", Mips RISC-based systems from the original 4D/60 to the Indy. The IRIS systems that contained Motorola 680X0 processors with model numbers like 1000, 1400, 2400, 3000 and 3030 are not covered here.

The Goals

The major goals of this document are to allow you, the reader, to do two things:

- Look at a Silicon Graphics workstation, maybe type in a few commands, and determine what kind of system it is, and what options it contains.
- Know what kind of interfaces are available, and on what platforms those interfaces are available.

What You'll Find

Platform Information

The term *platform* is used here to specify a particular set of three characteristics - the chassis the system is contained in, the number and type of processor(s), and the type of graphics subsystem (if any) the system contains. This aspect of SGI systems is seen most clearly in the Periodic Table of the IRIS's. A *platform* is the intersection of a graphics choice with a processor choice. See The Periodic Table of the IRIS's on page 5.

Inherent in determining the kind of machine is the use of one or more names. Machines are known by marketing names, engineering code names, or model numbers. Knowing what each of these names refer to will assist in defining the system in question. Names and their meanings are covered in the section on page 3.

IRIS Family Tree

Another key element in understanding SGI platforms is knowing where, historically, these platforms belong. The IRIS Family Tree has been created to answer this need. This diagram shows each major new chassis and shows which processor and graphics types were originally shipped with it. The diagram shows the year in which the platforms first shipped. See page 6 for this diagram.

Color and Marking Information

Silicon Graphics has become known for its use of bold colors on its products. This too, is a way to determine what might be inside the IRIS. Lately, badges have been used to reflect certain graphics options. The Color and Badging Chapter (page xx) shows how to decode these colors.

Chassis Tour

Knowing what a chassis looks like and where to find a particular input or output connection can be a great advantage in working with the system. For each chassis particular attention is devoted to identifying each interface and a pointer to a detailed definition of that interface. The Chassis Drawings section (starting on page 11) will help you in finding the interfaces available.

Interfaces

The various interfaces available on SGI platforms are documented in the Interfaces chapter. This information is truly the heart of this document and the longest section. The interfaces are grouped in categories:

- Serial Ports
- Keyboard/Mouse Ports
- Parallel Ports
- Disk Drive Interfaces
- Graphics Interfaces
- Video Interfaces
- Audio Interfaces
- Bus Interfaces
- Backplanes
- Networking Connections
- I/O Panel Plates
- Drive Sleds

Software Tools

Some information about the system is not discernible from examining the outside of the system. To aid in gathering more information about the system the chapter on Software Tools was created. This contains information on commonly known tools, such as hinv, as well as some less well known tools that can help determine the exact configuration of the system.

Terms, Nicknames and Code Names

Since terminology is so important, understanding the how to “decode” the internally used project names into the actual names used by Marketing is crucial. There are two reasons for this:

- Since the three elements that define a platform - Graphics, CPU and Chassis - were often developed as separate projects, they would have different project names. Knowing which part of the system the code name refers to is helpful.
- Second, some of the code names - specifically for the CPU and graphics - are sprinkled throughout the software code for IRIX. To an outsider these names make little sense but are invaluable if you know how to decode them.

The tables below shows the relationship between the internally used code name, the marketing name and the model numbers for SGI systems for chassis, CPU’s and graphics.

Chassis Code Name	Chassis Type	Marketing Name	Model Numbers
Twin Tower	Twin Tower	Power Series	4D/60, 70, 80, 85, 120, 210, 220, 240, 280, 310, 320, 340, 380, 420, 440, 480
Diehard	Single Tower		
Predator	Rack		
Eclipse	PI, TFLU	Personal IRIS	4D/20, 25
Magnum	TFLU	Personal IRIS	4D/30, 35
Diehard2	Deskside	Crimson	Crimson
Hollywood	Desktop	Indigo	4D/RPC
Eveready	Deskside	Onyx/Challenge	Onyx, Challenge L
Terminator	Rack		Onyx, Power Challenge XL
Fullhouse	Desktop	Indigo^2	Indigo^2
Guinness	Desktop	Indy	Indy

Table 1 Chassis Names

CPU Code Name	Description	Marketing Name	Found In Model Numbers
Lonestar	First R400 CPU for 4D Systems	Crimson	Crimson
Twin Peaks	Enhanced Floating Point R4K CPU	TFP	

Table 2 CPU Names

Graphics Code Name	Description	Marketing Name	Found In Model Numbers
Clover1	Original 4D Graphics	B, G	4D/50, 60, 70
Clover2	2nd Generation 4D Graphics	GT, GTX	4D/70, 80, 85, 120, 210, 220, 240, 280
Stapuft	3rd Generation 4D Graphics	VGX, VGXT	4D/310, 320, 340, 380, 420, 440, 480
Venice	4th Generation 4D Graphics	Reality Engine	4D/310, 420, 440, 480,
	Original PI Graphics	B, G	4D/20, 25, 30, 35
	Turbo PI Graphics	TG	4D/20, 25, 30, 35
Da Vinci	24 Bitplanes, No Z Buffer		4D/20, 25
Starter	Original Indigo Graphics	Entry Graphics	Indigo R3K, R4K
Express	Family of 2nd Generation Indigo Graphics	XS, XS24, XZ, Elan	Indigo R3K, R4K, Indy (XZ only)
Ultra	High End of Express Graphics Family	Extreme	Indigo^2
Newport	Original Indy Graphics, Low End Indigo^2 Graphics	XL	Indy, Indigo^2

Table 3 Graphics Names

A more lengthy lexicon of terms used to identify IRIS systems is provided as an appendix. This lexicon includes the Marketing terminologies as well as the Engineering terminologies. As is often the case, products are created long before their commercial name is chosen. Even after a product has been announced and has been shipping, members of the team who created it still refer to it by its “code name”. Indeed some of these code names are used as nomenclature for various software and hardware pieces. Not knowing what code name equates to a “real” name is like being lost in a foreign land without a magic decoder ring. Hopefully this will help.

What You Will Not Find

It would be ideal if it were possible to outline every possible combination of chassis, processor and graphics that ever existed. While tempting, this is not realistic. During the history of the IRIS systems, and primarily due to the modular nature of our graphics & processor subsystems and many upgrade programs, the markings on the outside of an IRIS may not actually reflect what is inside.