Printer Components

A printer can be described as consisting of 10 basic components. It is important to note that the components of a printer do not relate directly to physically identifiable devices. Components can also be definable logical processes.

Input

Inputs are mechanisms that feed media to be marked on into the printer. A printer contains one or more input mechanisms. Associated with each mechanism is the medial that is to be marked on. There is a large stet of possible media that can be associated with an input. The immediate goal of the standard is to provide information that is currently associated with a given input. The management of all possible media sources for a given input to a printer is a "Printing System Problem" and is beyond the current scope of this standard.

Output

Outputs are mechanisms that received media that has been marked on. A printer contains one or more output mechanisms. An output mechanism can logically have one or more finishing components associated with it. The exact interaction and sequencing between an output device and its associated finisher is very complex and depends on the type of finishing process and the exact implementation of the printer system. This standard allows for the logical association of a finishing process with an output device but does not put any restrictions on the exact sequence or interaction with the associated output device. The output and finisher devices may or may not be separate identifiable physical mechanisms depending on the exact implementation of a printer. In addition, a single output device may be associated with multiple finishing components and a single finishing component may be associated with multiple output devices.

Finisher

A finisher is a device that performs some operation on the media other than marking. Some examples of finishing processes are stapling, punching binding, inserting or folding. Finishing processes may have supplies associated with the process. Stapling, binding and punching are examples of processes that have supplies.

Supplies are generally though of as something that is being consumed by the printing process. However, some finishing processes generate waste products such a the punching process. The management of these waste products has to be considered in the management of printing devices as well as supplies that are consumed. In a generalized system waste products can be though of as being kept in receptacles and those receptacles go from empty to full just as an media output device. The distinction is that while supplies are consumed and warnings and alerts are generated when a supply is low or empty, a receptacle generates warning and alerts when they are nearly full and full.

Marker

The mechanism that produces marks on the pint media an it associated supplies. A printer contains one or more marking mechanisms. An example of multiple marking devices is a printer that has the capability to produce spot colors in addition to the main marking device. In addition, each marking device can have its own set of characteristics associated with it such marking technology and resolution.

In this model the marker component is viewed as very generalized and encompassed all aspects of a marking process. For example in a xerographic process, the marking process as well as the fusing process would be included in the generalized concept of marking process. With the generalized concept of a marking process, the concept of multiple marking supplies associated with a single marking component results. For example, in the xerographic process, there is not only a supply of toner, but there can also be other supplies such as a fuser supply that can be consumed and replaced separately. In addition there can be multiple supplies of toner for a single marker device, as in a color process.

Duplexer The duplexer component of a printer is a mechanism that turns the media over so that marks can be made on both sides. A printer may or may not contain a duplexer component. The exact operation of a printer is dependent on the exact implantation. Duplexers can take different approaches, some turn each piece of media over and print the front and then the back sequentially. The number of pieces of media in the duplexer path before the other side is marked can also vary. Another approach to duplexing is to stack the media in an internal tray. First all pages are printed on the front and stacked, then the pages are feed from the internal tray and marked on the back side.

Media Path The media path is the mechanism that moves the media through the printer and connects all other media related components, inputs, outputs, duplexer, markers and finishers. In general the design of the media path determines maximum speed of the printer as well as the maximum medial size that the printer can handle. Media paths are complex mechanisms and can contain many different identifiable mechanisms such as media movement devices and interlocks.

System Controller This component is entity that is responsible for the overall control coordination of the printing system. Generally, this component is implemented a computer system. The controller can range from simple single processor systems to multi-processor systems. In addition, controllers can have a full range of resources such as hard disks and operator displays.

Interpreter The interpreter component is that entity is responsible for the generation of the marked image on the media. The interpreter is generally implemented on the in software running on the System Controller component. While interpreters are generally implemented within the System Controller, each interpreter can be thought of logically, as an identifiable manageable resource.

Interface The interface is responsible for receive print and control data and commands from an attached computer system. A printer has one or more interface components. The various interfaces may be operating singularly or simultaneously depending on the implantation and operation of the printer. While interfaces are generally implemented within the System Controller, each interpreter can be thought of logically, as an identifiable manageable resource.

Internal The internal class of components are considered all devices and mechanisms that can not be associated with the other identified component classes, such as inputs, outputs, markers etc. An internal component is considered to be contained or associated within the physical boundaries of the printer.

External The external class of components are considered all devices and mechanisms that can not be associated with the other identified component classes, such as inputs, outputs, markers etc. An external component is considered to be contained or associated outside the physical boundaries of the printer.

Printer Component Descriptions, Status and Events

Information about printers is classified into three basic categories, descriptions, status and events. Descriptions convey information about the configuration and capabilities of the printer and its various components. Information is largely static information an does not generally change dynamically during the operation of the system.

Status is the information regarding the current operating state of the printer overall and its various components.

Events in printers are changes in state of various components that affect the printers ability to print. Events usually usually occur asynchronous to the operation of the computer system the printer is located in. When events occur there occurrence need to be conveyed to some management agent with in the system.

In the management and control of printers, information regarding the state of a printer is requited to be organized in two basic ways. First the data needs to be organized based on the various components of the printer, such as what are the capabilities of input device number 1 or what is the status of output device number 2. The second organization is the grouping of warnings and alerts within the printer, such as, what are all warnings or alerts within the printer. The first data organization is component inquiry based and the second is event based.

In the printer model informtion is organized in into various interrelated tables. The first set of tables provide descriptive and status information of various components. The second set of table provide information regarding the state of the printer organized, with tables organized around events, regardless of what component generated the event.

Events can be classified into two basic types, alerts and warnings. Alerts are events that immediately stop the printer from completing the current print job. Warnings are events that will affect the printer some time in the future but do not immediately affect the printers ability to compete the current print job. Whether a particular event is a warning or an alert is dependent on how a particular printer or printer operating mode deals with the event. An event that causes an alert in one printer may only be a warning in another printer. An example of this would be that of an input tray running out of media. In a single input printer, running out of media would cause an alert event because it would stop printing immediately, In a printer with two input components, could switch from one input tray to another and continue to print, in this case the media out condition in one input tray would only be a warning condition.

Events can also be assigned a class that relates to the "role model" of the person receiving the event information. Role models and the information required can significantly overlap. Because of this overlap the printer will break events into three different classes. It is the responsibility of the management layer in the system to determine how a particular event is handled and how and who that event is routed. The following are the three classes of events that will be returned from the printer.

Technical	Events that typically require advanced training and technical knowledge of the printer and its components. An example of a technical person would be a manufacture's Field Service representative, or other person formally trained by the manufacturer or similar representative.
Operator	Events that require an intermediate or moderate level of knowledge of the printer and its components. Typical examples of events that an operator can handle are filling of empty media trays, emptying full output trays and replacing toner cartridges.
Management	Events that have to do with overall operation of and configuration of the printer. Examples of management events are configuration change of components and job compete notifications.

The classification of the class of an event is done by the manufacturer of the printer. Any further event classification or event class changing is the responsibility of the management layer on the system the printer is in.

Printer Input Class - Table

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtInput	ID	Read-Only	Integer		
	Type	Read-Only	Enumeration		
	CapacityUnit	Read-Only	Enumeration		
	Max Capacity	Read-Only	Integer		
	CurrentCapacity	Read-Only	Integer		
	DimUnit	Read-Only	Enumeration		
	CurrentDimFeedDir	Read-Only	Integer		
	CurrentDimCrossFeedDir	Read-Only	Gauge		
	State	Read-Only	Integer		
	Name	Read-Only	Display String		
	Model	Read-Only	Display String		
	SerialNumber	Read-Only	Display String		
	Descriptor	Read-Only	Display String		
	Security	Read-Only	Enumeration		
	MaxDimFeedDir	Read-Only	Integer		
	MinDimFeedDir	Read-Only	Integer		
	MaxDimCrossFeedDir	Read-Only	Integer		
	MinDimCrossFeedDir	Read-Only	Integer		
	MarginFeedDir	Read-Only	Integer		
	MarginCrossFeedDir	Read-Only	Integer		
	MediaName	Read-Only	Display String		
	MediaSizeEnum	Read-Only	Enumeration		
	MediaDimUnit	Read-Only			
	MediaSizeFeedDir	Read-Only			
	MediaSizeCrossFeedDir	Read-Only			
	MediaWeight	Read-Only			
	MediaType	Read-Only			
	MediaColor	Read-Only			
	MediaFormParts	Read-Only			

Printer Output Class - Table

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtOutput	ID	Read-Only	Integer		
	Type	Read-Only	Enumeration		
	CapacityUnit	Read-Only	Enumeration		
	Max Capacity	Read-Only	Integer		
	CurrentCapacity	Read-Only	Gauge		
	State	Read-Only			
	Stacking Order	Read-Only	Enumeration		
	Bursting	Read-Only	Integer		
	Decollating	Read-Only	Integer		
	PageCollated	Read-Only	Integer		
	JobCollated	Read-Only	Integer		
	OffsetStacking	Read-Only	Integer		
	SlipSheet	Read-Only	Integer		
	Security	Read Only	Enumeration		
	Name	Read-Only	Display String		
	Model	Read-Only	Display String		
	SerialNumber	Read-Only	Display String		
	Descriptor	Read-Only	Display String		
	DimUnit	Read-Only	Enumeration		
	CurrentDimFeedDir	Read-Only	Integer		
	CurrentDimCrossFeedDir	Read-Only	Integer		
	MaxDimFeedDir	Read-Only	Integer		
	MinDimFeedDir	Read-Only	Integer		
	MaxDimCrossFeedDir	Read-Only	Integer		
	MinDimCrossFeedDir	Read-Only	Integer		
	Stitching	Read-Only	Enumeration		
	Folding	Read-Only	Enumeration		
	Binding	Read-Only	Enumeration		
	Punching	Read-Only	Enumeration		
	Trimming	Read-Only	Enumeration		
	Inserting	Read-Only	Enumeration		

Printer Finisher Class - Table

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtFinisher	ID	Read-Only	Integer		
	Type	Read-Only	Enumeration		
	NamedFinishings	Read-Only	Display String		
	ConsumableUnits	Read-Only	Enumeration		
	MaxCapacity	Read-Only	Integer		
	CurrentCapacity	Read-Only	Gauge		
	State	Read-Only			

Printer Finisher Supply Sub Class - Table

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtFinisherSupply	ID	Read-Only	Integer	ID of the Marker that this supply is associated with	
	Type	Read-Only	Enumeration		
	NamedFinishings	Read-Only	Display String		
	ConsumableUnits	Read-Only	Enumeration		
	MaxCapacity	Read-Only	Integer		
	CurrentCapacity	Read-Only	Integer		
	State	Read-Only			

Printer Marker Class - Table

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtMarker	ID	Read-Only	Integer		
	MarkTech	Read-Only	Enumeration		
	ProcessColorant	Read-Only	Integer	Number of Process Colors	
	SpotColorant	Read-Only	Integer	Number of Spot Corors	
	AddressabilityUnit	Read-Only	Enumeration		
	AddressabilityFeedDir	Read-Only	Integer		
	AddressabilityCrossFeedDir	Read-Only	Integer		
	State				

Printer Marker Colorant Detail SubClass - Optional

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtMarkerColo rant	MarkerID	Read-Only	Integer	ID of the Marker that this Entry is Associated With	
	Role	Read-Only	Enumeration		
	Order	Read-Only	Display String		
	Value	Read-Only	Integer		

Printer Media Path

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtMediaPath	MaxSpeedPrintUnit	Read-Only	Enumeration		
	MaxSpeedTimeUnit	Read-Only	Enumeration		
	MaxSpeed	Read-Only	Integer		
	PhyMediaUnit	Read-Only	Enumeration		
	MaxPhyMediaFeedDir	Read-Only	Integer		
	MinPhyMediaFeedDir	Read-Only	Integer		
	MaxPhyMediaCrossFeedDir	Read-Only	Integer		
	MinPhyMediaCrossFeedDir	Read-Only	Integer		

Printer Duplexer Class

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtDuplexer	ID	Read Only	Integer		
	Type	Read Only	Enumeration		
	State	Read Only			

Printer System Controller Class

Group Name	Attribute Name **M O O O**	Access	Type	Description	Values
prtController	RamSize	Read-Only	Integer		

Printer Control Class

Group Name	Attribute Name M O O O	Access	Type	Description	Values
ptrCtrl	Status	Read Only	Octe		
	Reset	Write Only	Integer		
	ResetSpecial	Write Only	Enumeration		
	Line Status	Read Write	Enumeration		
	ConrolPanelLang	Read Write	Enumeration		
	DuplexDefault	Read Write	Enumeration		
	OrientDefault	Read Write	Enumertion		
	InputDefault	Read Write	Integer		
	OutputDefault	Read Write	Integer		
	FinisherDefault	Read Write	Integer		

Printer Interpreter Class

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtInterpreter	ID	Read-Only	Integer		
	LangFamily	Read-Only	Enumeration		
	LangLevel	Read-Only	Display String		
	LangVersion	Read-Only	Display String		
	Descriptor	Read-Only	Display String		
	Version	Read-Only	Display String		
	AddressabilityFeedDir	Read-Only	Integer		
	AddressabilityCrossFeedDir	Read-Only	Integer		

Printer Interface Class

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtInterface	ID	Read Only	Integer		
	Type	Read Only	Enumeration		
	Status	Read Only			
	Desc	Read Only	Display String		
	IEEE1284DeviceID	Read Only	Display String		
	Enable	Read Write	Enumeration		

Enumerations

Addressability Unit	Phy Media Unit	Counter Unit	Speed Print Unit	Speed Time Unit	InputCapacityUnit	Output Capacity Unit	Finisher Consumable Unit
1 Other 2 Unknown 3 Inches 4 Centimeters	1 Other 2 Unknown 3 0.001 inches 4 0.01 millimeters	1 Other 2 Unknown 3 Characters 4 Lines 5 Impressions 6 Inches 7 Feet 8 Millimeters 9 Meters 10 Sheets 11 Seconds 12 Minutes 13 Hours	1 Other 2 Unknown 3 Characters 4 Lines 5 Impressions 6 Inches 7 Feet 8 Millimeters 9 Meters 10 Sheets	1 Other 2 Unknown 3 Seconds 4 Minutes 5 Hours	1 Other 2 Unknown 3 0.001 inches 4 0.01 millimeters 5 Sheet		1 Other 2 Unknown

Enumerations

Input Type	Output Type	Duplexer Type	Finisher Type	Named Finishing
1 Other 2 Unknown 3 Sheet-feed-auto-removable-tray 4 sheet-feed-auto-non removable tray 5 Sheet Feed Manual 6 continuous-roll 7 continuous-fan-fold	1 Other 2 Unknown 3 Removable Bin 4 UnRemovable Bin 5 Continuous Roll Device 6 Mail Box	1 Other 2 Unknown 3 Long Edge Binding 4 Short Edge Binding	1 Other 2 Unknown Stitching Binding Trimming Die-cutting Punching Perforating Slitting Inserting Covers Folding	1 Other 2 Unknown Staple Staple Top Left Staple Bottom Left Stable Top Right Staple Bottom Right Saddle Stitch Edge Stitch Punch Cover Bind

Media Orientation	Media Color		Line Status	
1 Other 2 Unknown 3 Portrait 4 Reverse Portrait 5 Landscape 6 Reverse Landscape	1 Other 2 Unknonw 3 White 4 Pink 5 Yellow 6 Buff 7 Goldenrod 8 Blue 9 Green 10 Transparent		1 Other 2 Unknown 3 On-Line 4 Pending On-Line 5 Off-Line 6 Pending Off-Line	

Enumerations

MarkTech	Interface Type		
1 Other 2 Unknown 3 Electophotographic:LED 4 Electrophotographic:Laser 5 Electrophotographic:Other 6 Impact:Moving_Head:Dot_Matrix:9pin 7 Impact:Moving_Head:Dot_Matrix:24pin 8 Impact:Moving_Head:Dot_Matrix:other 9 Impact:Moving_Head:Fully_Formed 10 Impact:band 11 Impact:other 12 Inkjet:Aqueous 13 Inkjet:Solid 14 Inkjet:Other 15 Pen 16 Thermal:Transfer 17 Thermal:Sensitive 18 Thermal:Diffusion 19 Thermal:Other 20 Electroerosion 21 Electrostatic 22 Photographic:Microfiche 23 Photographic:Imagesetter 24 Photographic:Other 25 Ion-deposition 26 E-beam 27 Typesetter	1 Other 2 Unknown 3 RS-232 4 IEEE1284 Parallel 5 Centronics Parallel 6 Local Talk 7 Network 8 SCSI 9 Coax 10 Twinax 11 Fax 12 IEEE 1394		

Printer and Component Status

prtCtrlStatus An octet that reflects the overall status of the printer. The host system reads this attribute to determine the overall status of the printer.

The alert and warning bits indicate that at least one alert or warning is active in the printer. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtInputStatus An octet that reflects the overall status of the particular input component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the input that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtOutputStatus An octet that reflects the overall status of the particular output component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the output that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtFinisherStatus An octet that reflects the overall status of the particular finisher component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the finisher that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtMarkerStatus An octet that reflects the overall status of the particular marker component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active.The alert and warning bits indicate that at least one alert or warning is active in the marker that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtDuplexerStatus An octet that reflects the overall status of the particular duplexer component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the duplexer that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtInterpreterStatus An octet that reflects the overall status of the particular interpreter component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the interpreter that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

prtInterfaceStatus An octet that reflects the overall status of the particular interface component that this field is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active. The alert and warning bits indicate that at least one alert or warning is active in the interface that this filed is associated with. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active

Event or Alert Notification.

When the printer detects that the alert or warning table has changed, an event or alert notification is sent by the printer to the host system. The notifiction is an octet that has the same format as the prtCtrlStatus attribute. The host system or managment system is expected to read the Alert or Warning Tables to determine exatly what alerts or warnings are active.

The following is a list of the various status field within the printer.

Printer Status prtCrtlStatus Octet		Input Status prtInputStatus Octet	Output Status prtOutputStatus Octet	Finisher Status prtFinisherStatus Octet
0 Any Printer Alert Active 1 Any Printer Warning Active 2 Printer On Request 3 Printer Unavailable / Broken 4 Printer Busy / Temporarily Unavailable 5 Line Bit 0 - 0 = On Line 6 Line Bit 1 - 1 - Pending On-Line 3 - Off-Line 4 - Pending Off-Line 7 Power On Alert		0 Input Alert Active 1 Input Warning Active 2 On Request / Tray Missing 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 Other 7 Unknow	0 Output Alert Active 1 Output Warning Active 2 On Request / Tray Missing 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7	0 Alert 1 Warning 2 On Request / Tray Missing 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7

Marker Status prtMarkerStatus Octet	Duplexer Status prtDuplexerStatus Octet	Interpreter Status prtIntgerpreterStatus Octet	System Controller Status prtSysControllerStatus Octet	Interface Status prtInterfaceStatus Octet
0 Alert 1 Warning 2 On Request / Tray Missing 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7	0 Alert 1 Warning 2 On Request / Tray Missing 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7	0 Alert 1 Warning 2 On Request 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7	0 Alert 1 Warning 2 On Request 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7	0 Alert 1 Warning 2 On Request 3 Unavailable / Broken 4 Busy / Temporarily Unavailable 5 6 7

Host resources MIB Pritner Related Status

HrDeviceStatus Enumeration	hrPrinterStatus Enumeration	hrPrinterDetedtedErrorState Octet	
1 Unknown 2 Running 3 Warning 4 Testing 5 Down	1 Other 2 Unknown 3 Idle 4 Printing 5 Warmup	0 Low Paper 1 No Paper 2 Low Toner 3 No Toner 4 Door Open 5 Jammed 6 Off-Line	

Printer Alert Sub-Class of Printer Control Class

Group Name	Attribute Name S O O O	Access	Type	Description	Values
prtCtrlAlert	Class	Read-Only	Enumeration		1 Other 2 Unknown 3 Managment 4 Technical 5 Operator
	Component	Read-Only	Enumeration		1 Other 2 Unknown 3 Input 4 Output 5 Finisher 6 Media Path 7 Duplexer 8 Marker 9 Internal 10 External 11 Interpreter 12 System Controller 13 Interface 14 Job
	ComponentID	Read-Only	Integer		
	Component Location	Read-Only	Integer		
	AlertCode	Read-Only	Enumeration		
	Description	Read-Only	Display String		

Printer Warning Sub-Class of Printer Control Class

Group Name	Attribute Name M O O O	Access	Type	Description	Values
prtCtrlWarnin g	Class	Read-Only	Enumeration		
	Component	Read-Only	Enumeration		
	ComponentID	Read-Only	Integer		
	Component Location	Read-Only	Integer		
	AlertCode	Read-Only	Enumeration		
	Description	Read-Only	Display String		

Enumerations

Component	Warning Code	Alert Code
Input	Cover Open Cover Closed Interlock Open Interlock Closed Media Low Media Empty Media Size Change Tray Missing	Cover Open Cover Closed Interlock Open Interlock Closed Media Low Media Empty Media Size Change Tray Miss ing Unavailable / Broken Busy / Temporarily Unavailable Jam
Output	Cover Open Cover Closed Interlock Open Interlock Closed Media Full Media Almost Full	Cover Open Cover Closed Interlock Open Interlock Closed Media Full Media Almost Full Tray Miss ing Unavailable / Broken Busy / Temporarily Unavailable Jam
Finisher	Cover Open Cover Closed Interlock Open Interlock Closed Finisher Suppy Low Finisher Supply Empty Finisher Recepticle Full Finisher Recepticle Almost Full	Cover Open Cover Closed Interlock Open Interlock Closed Finsher Supply Low Finisher Suppyl Empty Finisher Recepticle Full Finisher Recepticle Almost Full Tray Missing Unavailable / Broken Busy / Temporarily Unavailable Jam
Media Path	Cover Open Cover Closed Interlock Open Interlock Closed	Cover Open Cover Closed Interlock Open Interlock Closed Jam

Duplexer	Cover Open Cover Closed Interlock Open Interlock Closed	Cover Open Cover Closed Interlock Open Interlock Closed Media Full Media Almost Full Tray Miss ing Unavailable / Broken Busy / Temporarily Unavailable Jam
Marker	Cover Open Cover Closed Interlock Open Interlock Closed Marking Supply Low Marking Supply Empty	Cover Open Cover Closed Interlock Open Interlock Closed Marking Supply Low Marking Supply Empty Marker Recepticle Full Marker Recepticle Almost Full Jam
Internal	Cover Open Cover Closed Interlock Open Interlock Closed	Cover Open Cover Closed Interlock Open Interlock Closed
Exrternal	Cover Open Cover Closed Interlock Open Interlock Closed	Cover Open Cover Closed Interlock Open Interlock Closed
System Controller	Memory Increased Memory Decreased Cartridge Added Cartridge Deleted Resource Added Resource Deleted	
Interpreter	Memory Increased Memory Decreased Cartridge Added Cartridge Deleted Resource Added Resource Deleted	
Interface		

Group Name	Attribute Name M O O O	Access	Type	Description	Values