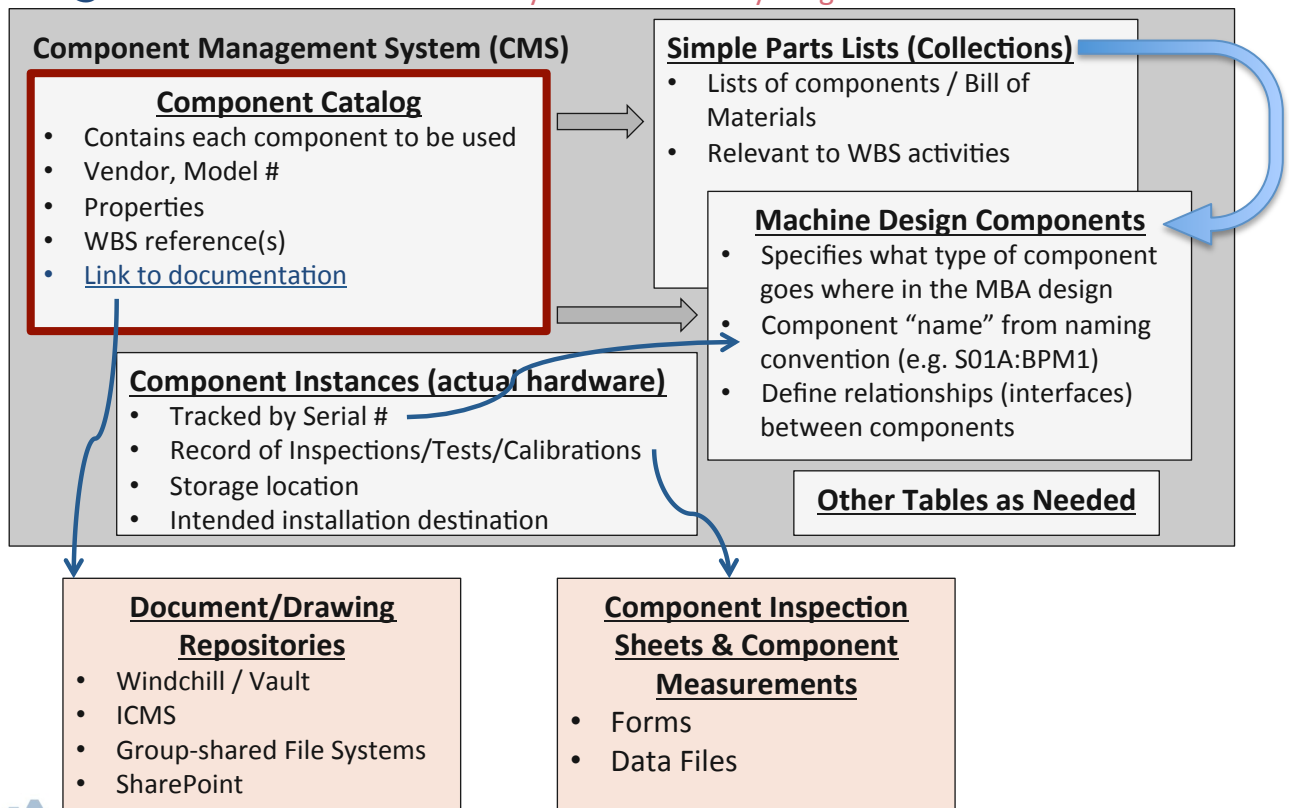


1. Next Set of Features – Highlights

- Component Instances [Glenn]
 - Scanning an appropriately encoded QR code will jump to a web page that allows the following actions:
 - Assign this “component instance” to a specific component (usually this is done only once)
 - Display all properties associated with this component (QA Level, link to Inspection Sheet, etc)
 - Add and/or modify any property for this component instance
 - Specify a new location for this component instance: i.e. Building/Room
 - Add an entry to a free-form “log” specific to this component instance
- Replace “Collections” with “Designs” and provide the following capabilities:
 - Ability to define hierarchical designs (designs can have child/parent designs)
 - Examples: S1 Lattice Design #23, Power Supply Cabinet Design, DAQ_RTFB_IOC Design
 - Addition of “design element properties” which are specific properties for a component as located in a specific design (e.g. the KQUAD that represents S01A:Q1 has design specific properties “sStart=2.9080942”, sEnd=3.288388094, “Length=.38029389”). This will allow us to capture a lattice as a “Machine Design” [John]
 - Provide an expandable/collapsible tree view of designs (improves understanding and navigation) [Jie]
 - Ability to define relationships between two design elements; e.g. design element S01A:Q1 (KQUAD) requires current from design element S01A:Q1:PS (power supply). [The database schema will support this but the User Interface will not be complete in the next version]
- The capability to associate WBS numbers with components and designs (designs were previously called collections) [Herman]
- Hyperlinks within properties and descriptions to directly link to ICMS documents, SharePoint, EDP, (and maybe PDMLink) [Ben]
- Enumerated Values for properties, such as [Yes|No], [Quality Level A|B|C|D], etc [Ben]
- Keep a history of property values for components, component instances, designs and design elements [Michael]
- Miscellaneous User Interface improvements (described in Details Section)

Big Picture

Goal: If you know one piece of information ... you can find everything else.



Component Database

2. Next Set of Features – Other Details

- **Bugs / Minor Improvements on Current Features**
 - SEARCH should include Element Name and Description field in design element table and property values
 - Displaying id columns can be confusing because Users interpret them as additional identifiers of the adjacent column. By default, only display id columns for components and designs.
 - Before deleting a design, ensure that it has no parent designs.
 - Provide a view order for child designs
 - Expand all lists by default (properties, child/parent collections, etc.) May not be necessary with new UI
 - Place Add/Save buttons for “Log Entries” close to the display of Log Entries (just like other fields)
 - Hyperlinks; Convert certain strings (e.g. www, APS_, etc.) found in properties (or any text fields ... such as descriptions) into hyperlinks
- **Add support for “Component Instances”**
 - See **Highlights** above
- **Rework Components/Component Types/Properties**
 - Allow Component Types to have Property Types
 - Keep a history of property values for components, component instances, designs and design elements
 - Constrain a Component to be of one Component Type (Form Factor and Function become Properties of Component (or Component Type)
 - Defined Properties of Component Types are inherited by Components of that type
 - If properties are added to a Component or Component Type, any instances (in the Instance Table or any Collections) should be updated with that property
 - Optionally define a generic component when a new “Component Type” is defined
- **Introduce “Designs” (which replaces “Collections” and adds additional functionality)**
 - See **Highlights** above
- **Introduce Connections between design elements (No UI support in next version)**
 - Allow definition of “Design Component Relationships” to *logically* connect two elements; e.g. S01A:Q1:PS -> provides power to -> S01A:Q1 (this will help track requirements, because the properties of S01A:Q1:PS must be compatible with the Operating Current of S01A:Q1)
 - Connections may have an attribute called “Resource” (power, current, cooling water, vacuum)
 - Attach “Resources” to Components, not Component connectors
- **Upload Script for Designs/Component Types/Components with Properties/Resources**
 - Provide framework for importing table entries from spreadsheets
 - Example: Lattice design import from spreadsheet
- **Significant UI Improvements**
 - Editors and Views for all new tables
 - Provide hierarchical tree view of designs
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