# 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)

# 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