

**Use Case 22: SCADA Data Update - KCPL****Summary:**

Initial sharing of real-time point data between the Energy Management System (EMS), the Distribution Facilities Management System (DFMS), a P.I. data historian and an ICCP package.

**Actor(s):**

Name	Role description
Actor 1	Provide a brief description of the role this actor has in this particular use case.
Actor 2	

**Probable Participating Systems:**

System	Services or information provided
EMS	Legacy ABB-SC EMS that provides SCADA data, AGC, and network applications
DFMS	Computer Aided Dispatch System (CADS) interface to share real-time data
Data Historian	Real-time point data historian <b>that captures and stores data and allows it to be accessed and retrieved in a variety of ways for display and data initialization purposes</b>
ICCP Client/Server	<b>PowerICCP, an implementation of a standard protocol for control center data-sharing, is used to pass real-time transmission system data to the Southwest Power Pool control center</b>

**Pre-conditions:**

Describe conditions that must exist prior to use case initiation.

**Assumptions / Design Considerations:**

State any known assumptions, limitations, constraints, or variations that may affect this use case. Consider:

- Timing requirements
- Update every 4-8 seconds
- approximately 3000 changes in value or state per second need to be passed
- **occasional non-delivery could be tolerated if the consuming application were aware of the non-delivery and could reinitialize; not knowing is not acceptable**
- Transfer delay < 4 seconds

**Normal Sequence:**

Use Case Step	Description
Step 1	EMS or ICCP publishes updates to point data values (i.e., MeasurementValue objects that are <b>close-to-real-time values of measurements and states of devices on the transmission system and in substations; values and states can be either telemetered or calculated; are typically updated in the source system every 4-7 seconds</b> ). EMS Point ID (includes location field and name field) is parsed for device association (like R2334 feeder breaker at Loma Vista substation) and for measurement type (like A Amps

	reading). DFMS, Historian, and ICCP are consumers of data.
Step 2	DFMS updates its data values
Step 3	As a consumer, ICCP prepares a Transfer Report to send the updated values to the Power Pool
Step 4	As a consumer, EMS updates its measurement values.
Step 5	Historian logs data value changes

**Exceptions / Alternate Sequences:**

DFMS needs snapshot of current values and states for initialization.

**Post-conditions:**

Describe conditions that must exist at the conclusion of the use case.

**References:**

Use Cases referenced by this use case, or other documentation that clarifies the requirements or activities described.

**Issues:**

ID	Description	Status
1.		

**Revision History:**

No	Date	Author	Description
0.	7/4/98	P. Brown	

**Use Case Diagram:**