Use Case 16: Field Control Request

Summary:

Executes a field control request from a System Operator or application program (like Capacitor Bank Monitoring) and reports field status change.

Actor(s):

Name	Role description
System Operator	Monitors and controls system operation
Telemetry Interface	Provides telemetry data in the form of analog measurements, status, or accumulator data from substation, neighboring control center, or field device.
Controls Interface	Implements control requests in the field.

Probable Participating Systems:

System	Services or information provided
User Interface	Handles operator communication.
Control Coordinator	Manages control requests.
Power System State Model	Creates the best estimate of current state of the power system.
Alarm System	Forces notifications to the human user's attention.
History/Logging	Records power system events.

Pre-conditions:

System is operational.

Assumptions / Design Considerations:

There may be many telemetry interfaces and many user interfaces active.

Normally, the control interface and the telemetry interface are the same.

Normal Sequence:

Use Case Step	Description
Step 1	The System Operator initiates an operator control request,
Step 2	Request in progress is noted at the user's console and is logged.
Step 3	The control request is examined for: • permission to execute the request • conflicts with other controls • who should handle the request
Step 4	The field control request is issued and is logged.
Step 5	Request in progress is noted in the power system model.
Step 6	Field status change is detected and reported back. (Perhaps through the normal data update channels, except that the power system model observes that this change was requested.)
Step 7	User interfaces are updated.
Step 8	Change is logged.

Exceptions / Alternate Sequences:

If the field control request is not executed, the System Operator is notified including the reason if known. (There are several points in the sequence at which the request can either fail or be rejected.) The operations model and one-line displays are not updated.

Post-conditions:

Operation model and active displays updated

References:

- Uses the SCADA Data Update use case.

Issues:

ID	Description	Status
1.		

Revision History:

No	Date	Author	Description
0.	3/11/98	T. Saxton	Original
1	3/19/98	J. Britton	Redefined Actors and Participating Systems, added logging step, added more detail in sequence of steps

Use Case Diagram:

See Use Case Diagram on Volt-Var Optimization Use Case

Event Sequence Diagram: