



Applied Systems Engineering, Inc.

**Technical Note 22**  
**IEC Variable Change Processing**

## About Change Processing

If the user application supports the DAC property IPROP\_DACPNT\_FLAGS for any IEC variables the IECPT will use this property to determine if a variable should be transmitted during a class 2 poll. The property IPROP\_DACPNT\_FLAGS returns to the IECPT an indication on whether the variable has changed or not. The flags property is a bit mask of conditions present for a variable. The two bits used for change processing are DAC\_PNTFLG\_VALUE\_UNCHANGED and DAC\_PNTFLG\_QUALITY\_UNCHANGED. When both of these flags are asserted true, the IECPT will not transmit the variable on a class 2 poll. The following steps should be performed by the user application to support variable change processing:

1. The property IPROP\_DACPNT\_FLAGS should be supported by the user application. When the property is used by the IECPT the user should return the current state of the variables flags.
2. If the user does not want a variable to be transmitted on a class 2 poll both the flags DAC\_PNTFLG\_VALUE\_UNCHANGED and DAC\_PNTFLG\_QUALITY\_UNCHANGED should be set true for the variable. The IECPT will skip variables when both of these flags are true.
3. When a variable is read by the IECPT the user application should assert both of the flags DAC\_PNTFLG\_VALUE\_UNCHANGED and DAC\_PNTFLG\_QUALITY\_UNCHANGED indicating that the variable is unchanged.
4. Whenever a variable's value or quality changes the user application should de-assert the appropriate variable flag. This will cause the variable to be read and sent to the remote station. When the variable is read the user application should re-assert flags DAC\_PNTFLG\_VALUE\_UNCHANGED and DAC\_PNTFLG\_QUALITY\_UNCHANGED indicating that the variable is no longer changed.