

# EPICS: CSS-Phoebus

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I am developing an EPICS alarm system based on CS-Studio Phoebus. Phoebus will be used for new EPICS system development and will replace the existing Eclipse-based CS-Studio systems as detailed in note [DSG Note 2021-37](#) and talk [DSG Talk 2021-17](#).

While working on the development of the alarm system, I discovered the previously working Phoebus V4.6.10 display screens do not connect to the test softIOC process variables.

To debug this failure, I used the Phoebus alarm test system I designed and programmed for the development of the alarm system. As shown in Fig. 1, the Phoebus alarm test system consists of an EPICS softIOC I developed which produces process variables. These process variables use EPICS channel access to communicate to any client on the network including CS-Studio Phoebus applications.

I tested the communication between the softIOC and the CS-Studio Phoebus display program. Running independently from any other Phoebus application, I discovered that the display program would not connect to the softIOC process variables.

I tested the communication using another CS-Studio Phoebus application named *PV List* which also displays a simple list of chosen process variables in a tabular format. This application also would not connect to process variables.

I also tested using the Phoebus alarm system core programs I have developed and was previously connecting correctly to the test softIOC. All three CS-Studio Phoebus applications would not communicate with the test softIOC. What all three CS-Studio applications have in common is the use of EPICS channel access for communication with the softIOC. I also checked the CS-Studio Phoebus error reporting application. No errors were reported.

- **Developing CS-Studio Phoebus-based controls, monitoring, and alarm system**
- **Debugging communication failure between Phoebus and SoftIOC**

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I also debugged the issue with the softIOc control console to see if the error reporting from the IOC had information regarding this EPICS channel access issue. The softIOc reported no errors. The softIOc did report that it was working normally process variables were active.

Next, I tested the system using an independent EPICS client (MEDM) to see if another program could read and write process variables to the test softIOc. This did work correctly.

Through this debugging procedure, I have discovered that EPICS channel access reception via CS-Studio Phoebus is not working correctly.

I plan to complete the debugging of the EPICS channel access communication issue with CS-Studio Phoebus applications as the next step in the development of the Phoebus alarm system.

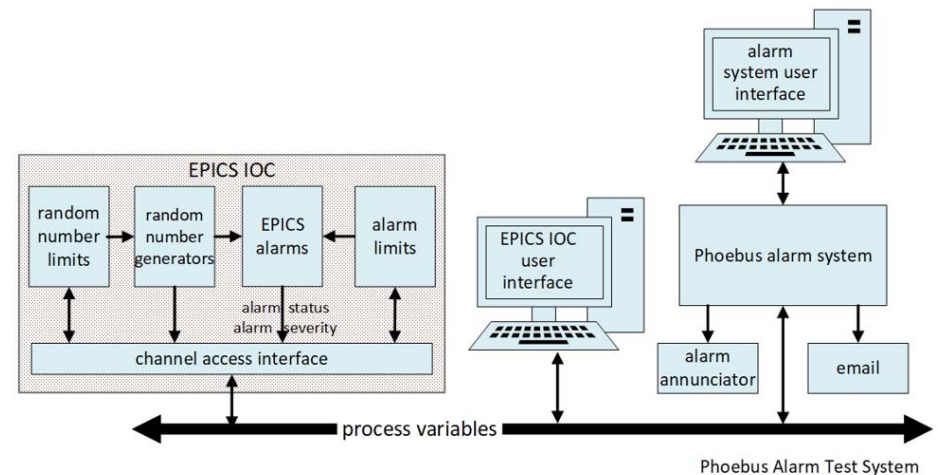


FIG.1. Phoebus Alarm Test System