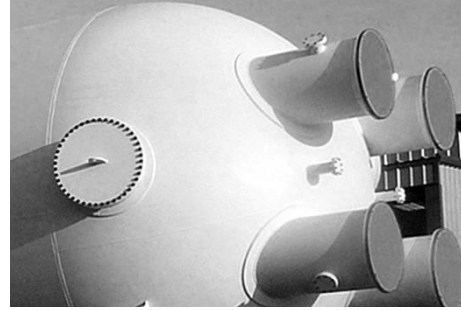
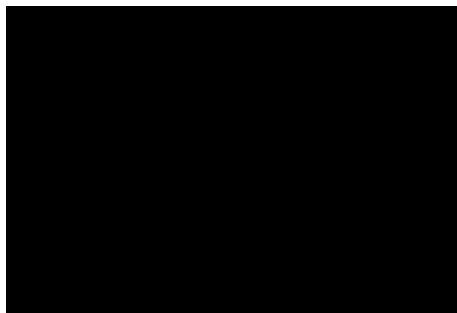


**CURTISS -  
WRIGHT**



# 2018 User Symposium

## 1F-6 PPC Replacement



# 1F-6 PPC System Replacement

- **GE Designed BWR-5 (first BWR-5 design for TEPCO)**
  - Built by Original Vender
- **Replacement of 1F-1, 1F-3 and 1F-6 PPC systems by TEPCO and Curtiss-Wright under discussion at the time of the earthquake and tsunami at Fukushima Daiichi (1F-2 previously completed and 1F-4 and 1F-5 in progress)**
  - Consideration of replacing 1F-6 PPC suspended as a result of the accident.

# 1F-6 PPC Replacement

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- **Reduced function PPC system required for data monitoring through decommissioning**
- **Project Initiated in 2016 to replace 1F-6 PPC System**
  - 20 year old Original Vender system
  - Limited function system
  - Minimum Cost
  - Existing equipment diverted as much as possible

# 1F-6 PPC System Functions (R\*TIME)

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- **R\*TIME Functions of 1F-6 PPC**
  - RTP 3000 TAS I/O
  - Redundant System
  - Calculations
  - Alarming
  - Archive
  - Messages

# 1F-6 PPC System Functions (R\*TIME)

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- **R\*TIME Functions of 1F-6 PPC (cont.)**
  - System Monitoring
  - Point Summaries
  - ODBC Server
  - R\*TIME Viewer Displays

# 1F-6 PPC System Functions (Site Specific)

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- **Site Specific Functions of 1F-6 PPC**
  - SPDS Interface
  - Digital Recorder Interface (Ohkura Electric)
  - Environment Monitoring System Interface
  - Site Specific Data Displays (Fuel Pool Monitoring)
  - Automated Message Output

# 1F-6 PPC Replacement

## ■ Upgraded Hardware

### – PPC Server Hardware

PPC Servers     · · · Fujitsu Primergy RX2520 M1

DC Servers     · · · Fujitsu Primergy RX2530 M2

Archive Servers · · · Fujitsu Primergy RX2520 M1

### – Network Equipment

Fujitsu L2 switches

### – Display Workstations

Custom made Built-on PCs ( Small size PC )

### – Hardware design significantly simplified from 1F-5

# 1F-6 PPC Replacement

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## ■ Software Upgraded

- R\*TIME Server V 14.x

- Site Specific Applications

  - Digital Recorder Interface (Ohkura Electric)

  - Environment Monitoring System Interface

  - Site Specific Data Displays (Fuel Pool Monitoring)

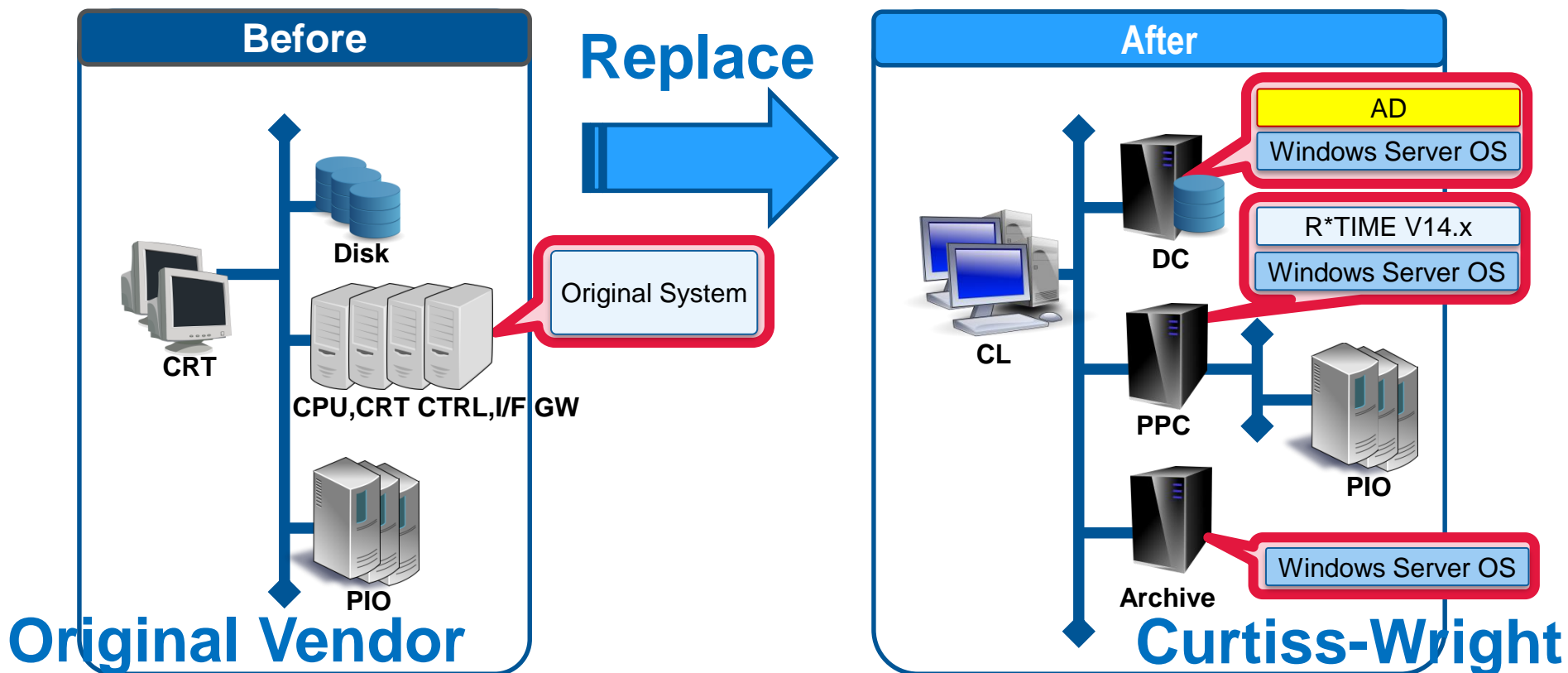
- R\*TIME Viewer V 4.10.x



# 1F-6 PPC Replacement Image

## ■ Replacement Image

- Original System Configuration to CL/SV



# 1F-6 PPC Replacement Schedule

- **Project Duration 14 months**
  - Start Feb/2017
  - Complete Mar/2018

|                          | 2017 |     |     |     |     |     |     |     | 2018 |     |     |
|--------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
|                          | Feb  | ... | May | ... | Sep | Oct | Nov | Dec | Jan  | Feb | Mar |
| H/W Design<br>Setting-Up |      |     |     |     |     |     |     |     |      |     |     |
| R*TIME<br>Config         |      |     |     |     |     |     |     |     |      |     |     |
| FAT                      |      |     |     |     |     |     |     |     |      |     |     |
| SAT                      |      |     |     |     |     |     |     |     |      |     |     |