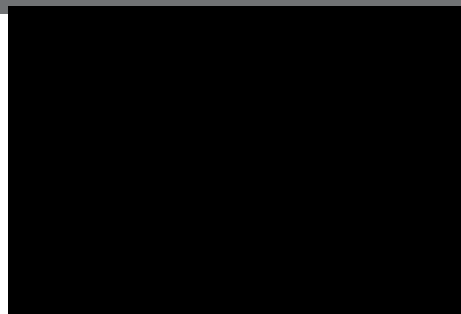


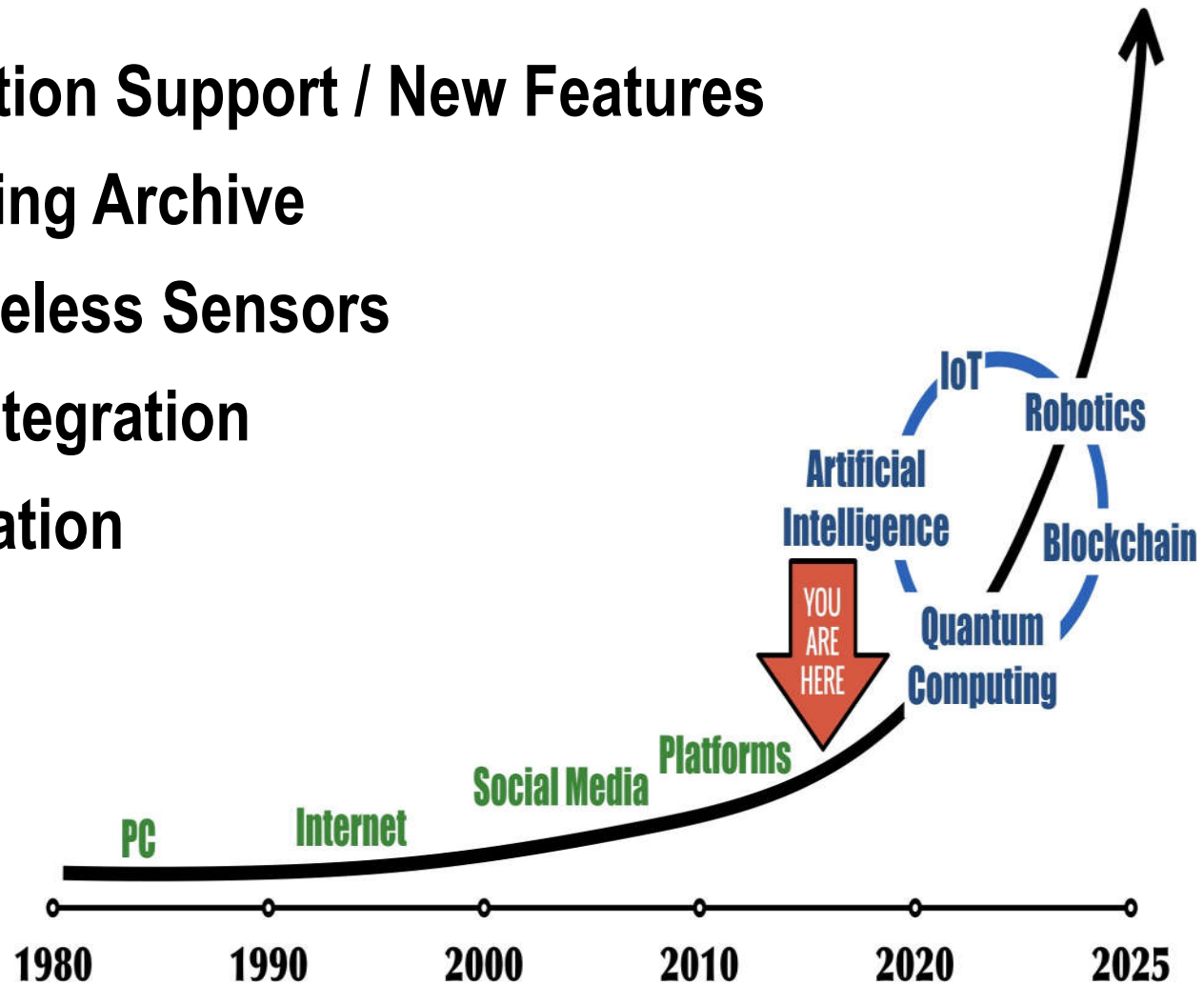
R*TIME Roadmap and Innovation 2020 Symposium

Brent Young & Nathan Obuchowski



R*TIME V15.0 Overview

- 64 Bit Application Support / New Features
- Change Tracking Archive
- Integrated Wireless Sensors
- Web Viewer Integration
- Mobile Application



Visual Studio / Operating Systems

R*TIME V14 VS/OS	R*TIME V15 VS/OS	R*TIME V15.1
Windows Server 2008/2012	Windows Server 2016	Windows Server 2019
Visual Studio 2008/2012	Visual Studio 2015/2017	Visual Studio 2017



64 Bit Application Support / New Features

- **64 Bit Status**
- **64 Bit WCVT / CVT**
- **64 Bit Applications**
- **64 Bit Time**
- **Test Mode**
- **VSupport / Database Changes**

DAS Health

- **New model for marking cards, chassis, DASes as Good (green), Bad (red), or Suspect (yellow)**
 - If all points are good, the component is good (green)
 - If no points are good, the component is bad (red)
 - Otherwise, the component is marked suspect (yellow)
- **The weight of DASes for the DAS health now accounts for point counts.**
- **Card slot values on the Hardware Health displays now match the RTP Silk Screen numbering.**

Change Tracking Archive

- **Change Tracking Archive for V15** – See Kevin Coble's Presentation
 - Records **ALL** changes to point values or status by default
 - Changes are time stamped when the associated 'vput' function is called
 - Ability to add compression delta
 - No need to define frequency of record.
- **Legacy Archive Format (Features Maintained)**
 - No Longer Used?

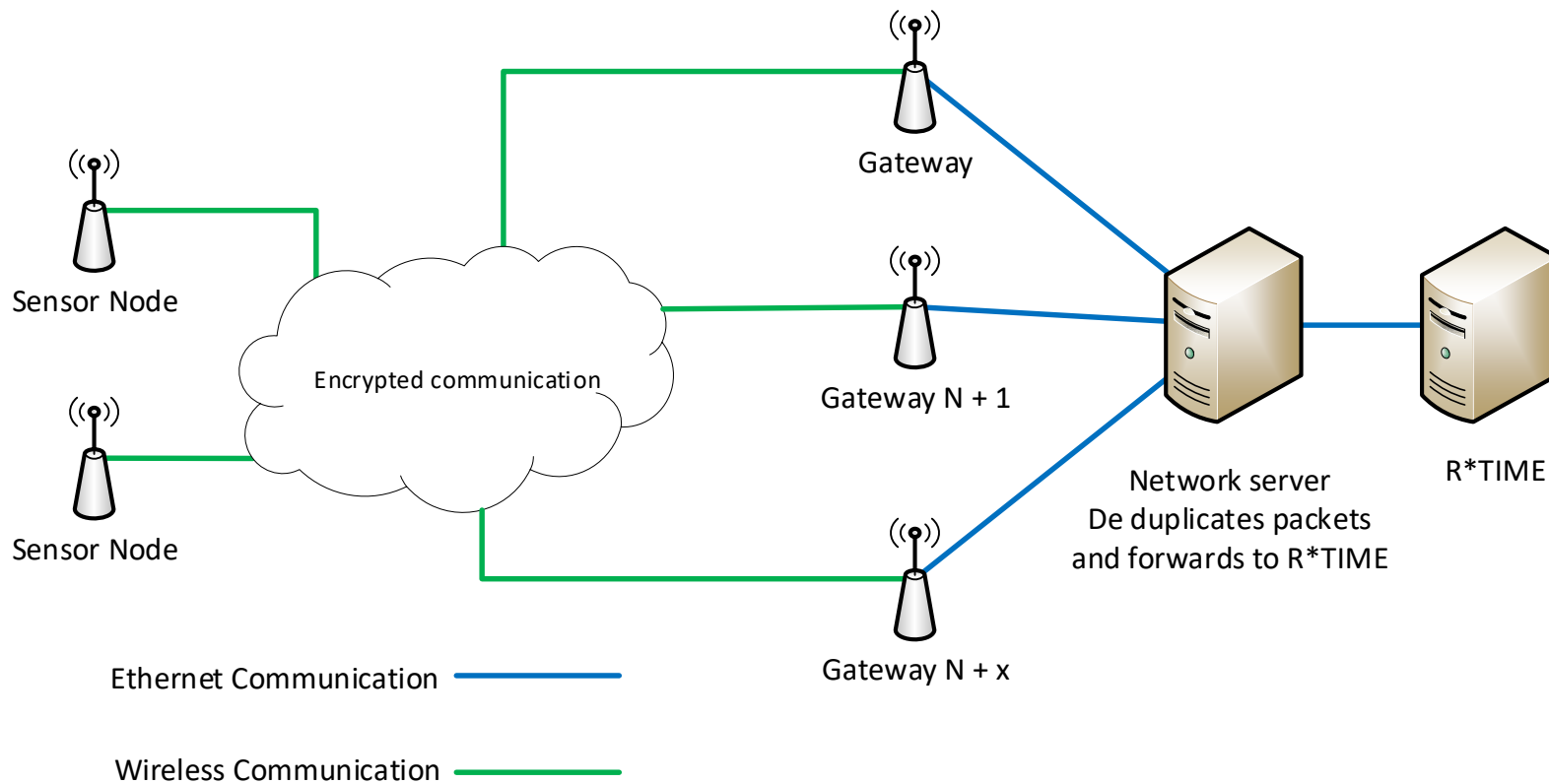
R*TIME V15.1 Overview

- **Data Source Time Stamping**
- **Database Normalization (Alarm Tables)**
- **Addition of OPC UA**
- **DNP3**
- **Removal of ODBC**
- **New DB Compare Utility (TBD)**

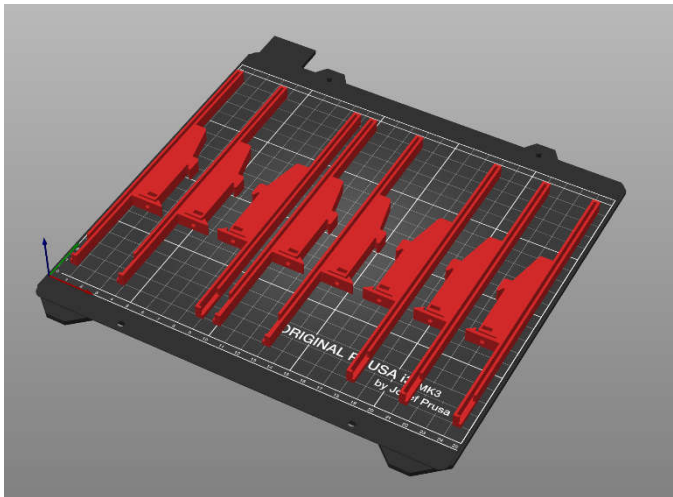
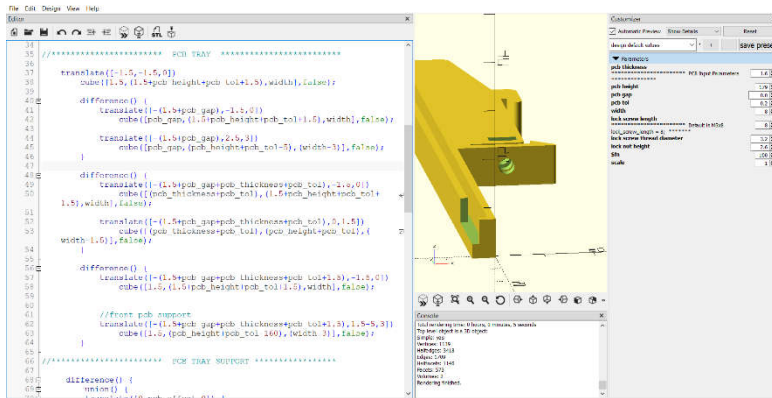
Moving to the Future...15.2

- **Additional updates to CTA**
 - Additional Backup Features
 - Caching enhancements to reduce potential loss on Catastrophic failures (Power Loss)

R*TIME Innovations – LoraWan wireless

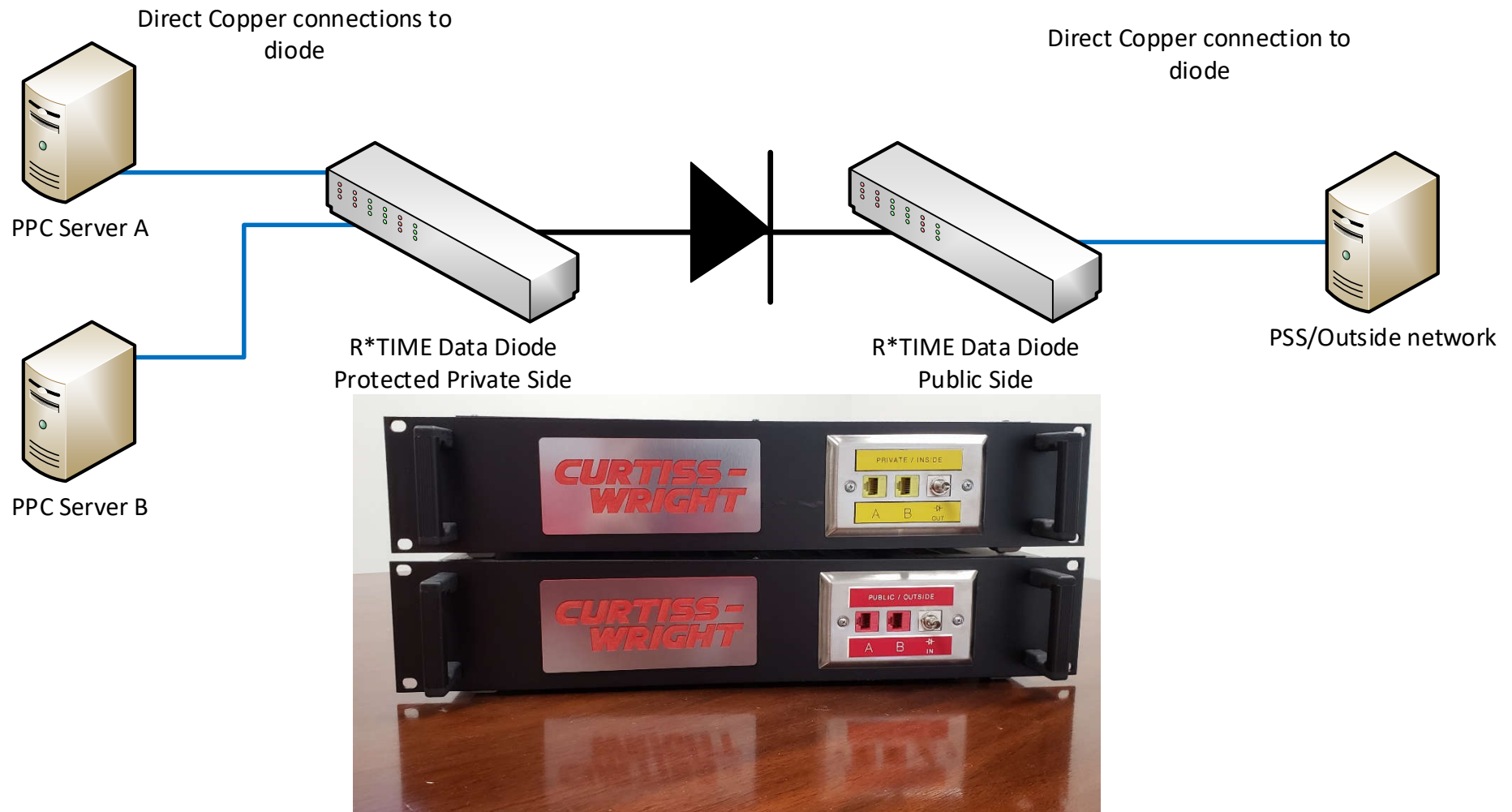


R*TIME Innovations – 3d Printing



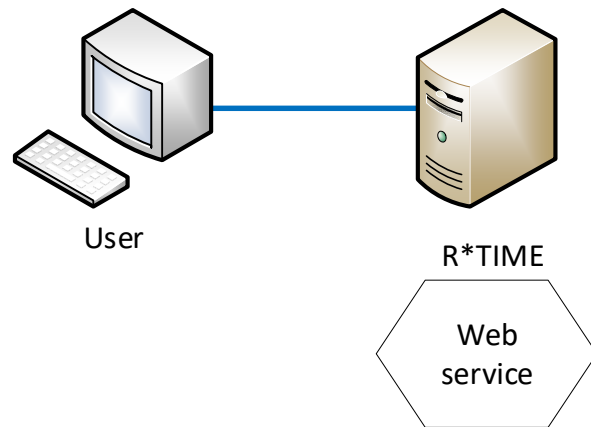
■ **Code → Model → Print**

R*TIME Innovations – R*TIME Data Diode



- Could allow CW projects to copy files from production systems to CW network while maintaining network isolation

R*TIME Innovations – PDF Reports



Battery Voltage:

Input 1 (Digital):

Input 2 (Analog):

Input 3 (Analog):

Properties: Text Box

General Data Events

Name..... VALUE;Salem1;DITEST011

Label Field.....

Max. text length..... 0

Enabled..... Yes

Visible..... Yes

- PDF Process:
- Get live data from R*TIME
 - Fill data into PDF
 - Serve PDF to user

Battery Voltage: 3.15

Input 1 (Digital): 0

Input 2 (Analog): 0

Input 3 (Analog): 5.011

- Allows users to create PDF reports without coding while integrating R*TIME data
- Web service runs on R*TIME server so users can get reports with standard web browser

R*TIME Innovations – Other applications

- **Archive replay**
 - Allows users to replay archive data directly from R*TIME archive
 - Allows Simulator groups to record drill/exam data behind closed doors and replay on a R*TIME PSS server at time of drill while keeping Simulator free for other activities
- **OPC UA interface**
 - Newest version of OPC – TCP/IP based, does not use Windows DCOM
- **Testpoint++ an updated version of Testpoint for R*TIME**

TestPoint - Version: 2019.11.21.22446

Points:

Update Rate (ms):

Wave Outputs: ☒ ON ☐ OFF

	Point	Database	Current Value	Current Quality		Quality to Apply	Value to Apply	Wave Type	Options
<input checked="" type="checkbox"/>	AITEST003	SALEM1	1.564344	0 - Good	<input type="button" value="Apply"/>	0 - Good	0.0000	Sine Wave	Amp:10 W1:10000 W2:0 Offset:0 No
<input checked="" type="checkbox"/>	AITEST002	SALEM1	0	0 - Good	<input type="button" value="Apply"/>	0 - Good	0.0000	One Shot	
<input checked="" type="checkbox"/>	AITEST001	SALEM1	3.15	0 - Good	<input type="button" value="Apply"/>	0 - Good	0.0000	One Shot	
<input checked="" type="checkbox"/>	DITEST001	SALEM1	0	0 - Good	<input type="button" value="Apply"/>	0 - Good	0.0000	One Shot	

Disclaimer

- The following slides present at least one version of a possible alternate reality for the purpose of eliciting a discussion between Curtiss-Wright and our customers. Customer requirements / needs / wants will be a big determiner on what this new reality looks like.
- **This is the interactive Portion!!!**

R*TIME New Features

- **What do you want / need???**
 - **IIOT**
 - **Cyber Security**
 - **Historian**
 - **Visualization**
 - **Virtualization**
 - **Wireless**
 - **Fleet Integration**
 - **Other Protocols?**
 - **Control Systems (Safety / Non Safety)**
 - **I/O needs (RTP, Allen Bradly (Rockwell), NI, other...)**
 - **Innovation Products**
 - **Tools**

Brent Young

BYoung@CurtissWright.com

***CURTISS -
WRIGHT***

Nathan Obuchowski

NObuchowski@CurtissWright.com