



# 10 Ways to Pretend You're an Expert in Synchrophasors (And Maybe Fool Yourself!)

Co-hallucinating with ChatGPT 4o

*Kevin D. Jones, Ph.D*



# News Article

## How to Become a Synchrophasor Whisperer (Or at Least Sound Like One)

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The fifth of the 'Synchrophasor' series...

# News Article

## What Synchrophasor Experts Won't Tell You: *Its Mostly Guess Work*

BY JEFFREY M. PERKINS

PHOTOGRAPH BY JEFFREY M. PERKINS

It's a common sight in the world of synchrophasor technology: a man in a brown sweater, looking thoughtful, with his hand to his forehead. He is surrounded by a chaotic scene of question marks, puzzle pieces, and darts. The scene is a visual metaphor for the complexity and uncertainty of the technology. The man is the expert, and the scene is the problem he is trying to solve. The puzzle pieces represent the different components of the technology, and the question marks represent the unknowns. The darts represent the challenges and the need for precision. The man's expression is one of concentration and determination, suggesting that he is working hard to solve the problem. The overall tone of the image is one of intellectual challenge and the pursuit of knowledge.

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## The 5 Stages of Synchronphasor Acceptance— *Which One Are You Stuck In?*

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# News Article

## Why PMUs are the Grid's Answer to Middle Management

By [illegible]

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[illegible text]

[illegible text]

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# News Article

## 7 Mental Shifts So Obvious Even your SCADA Data Can See Them

### LEADING TOPICS

SCADA systems are the backbone of industrial control systems, providing real-time monitoring and control of processes. However, many SCADA systems are outdated and lack the ability to detect anomalies or predict failures. This article explores seven mental shifts that can help SCADA operators and engineers improve their systems and prevent downtime.

1. \*\*Shift from reactive to proactive monitoring:\*\* Instead of waiting for a failure to occur, operators should use predictive analytics to identify potential issues before they happen. This requires a shift in mindset from simply monitoring data to actively analyzing it for trends and patterns.

2. \*\*Shift from manual to automated data collection:\*\* Manual data collection is time-consuming and prone to error. Automating data collection allows operators to focus on more critical tasks and ensures that data is accurate and consistent.



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10. \*\*Shift from siloed to integrated data:\*\* SCADA systems often operate in isolation, making it difficult to correlate data from different sources. Integrating SCADA data with other systems, such as ERP or CRM, can provide a more comprehensive view of the organization's operations.

11. \*\*Shift from reactive to proactive maintenance:\*\* Instead of waiting for a failure to occur, operators should use predictive analytics to identify potential issues before they happen. This requires a shift in mindset from simply monitoring data to actively analyzing it for trends and patterns.



# News Article

## Waveform Warriors: 7 Mental Models to Restore Your Resilience

By [Name] | [Date]

Category: [Category]

Keywords: [Keywords]

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# News Article

## Synchrophasors and Coffee: *Keeping Experts Awake and Stressed in Equal Measure*

By [Name] on [Date]

The first paragraph of the article, discussing the importance of staying awake and stressed in the context of synchrophasors.

The second paragraph of the article, continuing the discussion on the challenges of maintaining alertness.

The third paragraph of the article, exploring the role of stress in the context of the research.

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The first featured article snippet, starting with 'The first paragraph of the article...'.

The second featured article snippet, starting with 'The second paragraph of the article...'.



# News Article

## Grid Stability: Now with 100% More Data to Stress You Out



By [Name] on [Date]

Category: [Category]

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The grid is becoming increasingly complex and unstable as more data is added. This is a major concern for the industry, as it could lead to a collapse of the system. The good news is that there are ways to manage this data and keep the grid stable. One way is to use more advanced software that can handle large amounts of data. Another way is to use more hardware that can process data faster. Both of these methods can help to keep the grid stable and prevent a collapse.

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*Its like Learning  
to Ride A Bike, if  
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# Listicle Appendix

Stop the Synchro Struggle! 10 Mental Shifts You Need to Embrace the Inevitable

How to Become a Synchrophasor Whisperer (Or at Least Sound Like One)

The 5 Stages of Synchrophasor Acceptance—Which One Are You Stuck In?

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Waveform Warriors: 7 Mental Models to Restore Your Resilience

Grid Stability: Now with 100% More Data to Stress You Out

Learning Synchrophasors: Its like Riding A Bike, if the Bike Was On Fire

Synchrophasor Savvy: 6 Expert Tips (Or Just Really Good Guesses)

10 Ways Synchrophasors Will Make You Question Everything You Thought You Knew About the Grid (And Maybe Life Itself)

Stop Resisting! 7 Ways Synchrophasors Are Here to Improve Your Life (And Maybe Your Sanity)

10 Times Experts Were Just as Confused by Synchrophasors as You Are

10 Synchrophasor Truth Bombs You're Probably Ignoring—But Shouldn't

Why Synchrophasors Are the Future—And 7 Ways to Stop Pretending They Aren't

Phasors Gone Wild: 5 Data Surprises You'll Pretend to Understand

You Can't Ignore This: 9 Synchrophasor Facts That Will Make Your Head Spin (In a Good Way)

Expert Mode Activated: Now What Do All These Waveforms Mean?

From Zero-to Synchrophasor Hero in 10 Easy (or Not-so-easy) Steps

10 Shocking Synchrophasor Realizations That Will Make You Rethink Everything (Seriously!)

From Analog to AI: 6 Mental Shifts That Will Make Synchrophasors Your New Best Friend


10 Ways to Pretend You're an Expert in Synchrophasors (And Maybe Fool Yourself!)

7 Signs You're Stuck in the Past: Synchrophasor Realities You Need to Embrace, Like Yesterday

Why Synchrophasor Data is the Frenemy You Didn't Know You Had

Stop Resisting! 8 Ways Synchrophasors Are Dragging Utilities Kicking and Screaming into the Future





# Stop the Synchro Struggle!

*8 Expert Mental  
Shifts You **NEED**  
to Embrace the  
Inevitable*





# Synchrophasors: A Fundamental Shift

- Transmission is fundamental.
- Measurement is fundamental.
- New capability arises from seeing the previously unseeable.

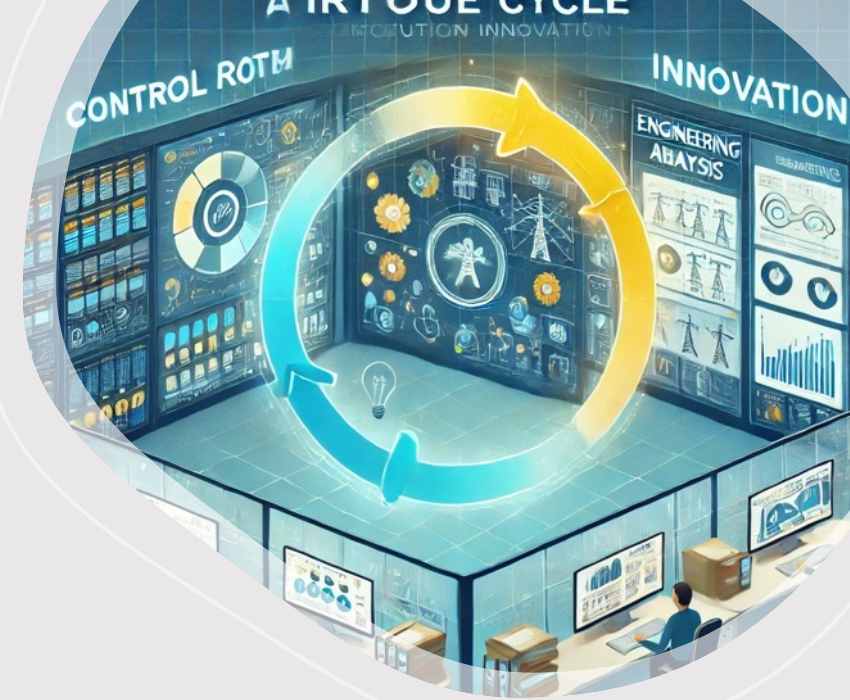


# No remaining technological barriers

- No excuses
- No sensor limitations
- No comms limitations
- No ecosystem limitations







## We Have a Complex Relationship with the Control Room

- Synchrophasors first imaged as modeling/analysis tool
- Capitalizing on 2003 Blackout, investment catalyzed control room focus.
- Intrinsic org dynamics require faster innovation cycle driven by engineering analysis
- Drives virtuous cycle that leads to control room



# Oscillations Are the “Killer App”

- Power Electronics are having their moment
  - Data Center Load
  - FACTS
  - IBRs
- Local oscillations lead to capital inefficiency







# All Time vs Real-Time

- Not about volume
- Not about AI
- Ambient vs Events
- Chronic vs acute health
- Real-time is the Special Relativity to the All-Time General Relativity



The background of the slide is an abstract digital illustration. It features a dense field of small, glowing blue and yellow dots. These dots are connected by thin, vertical and diagonal lines, creating a grid-like or network-like structure. The overall color palette is dominated by deep blues and bright yellows, giving it a high-tech, data-driven appearance.

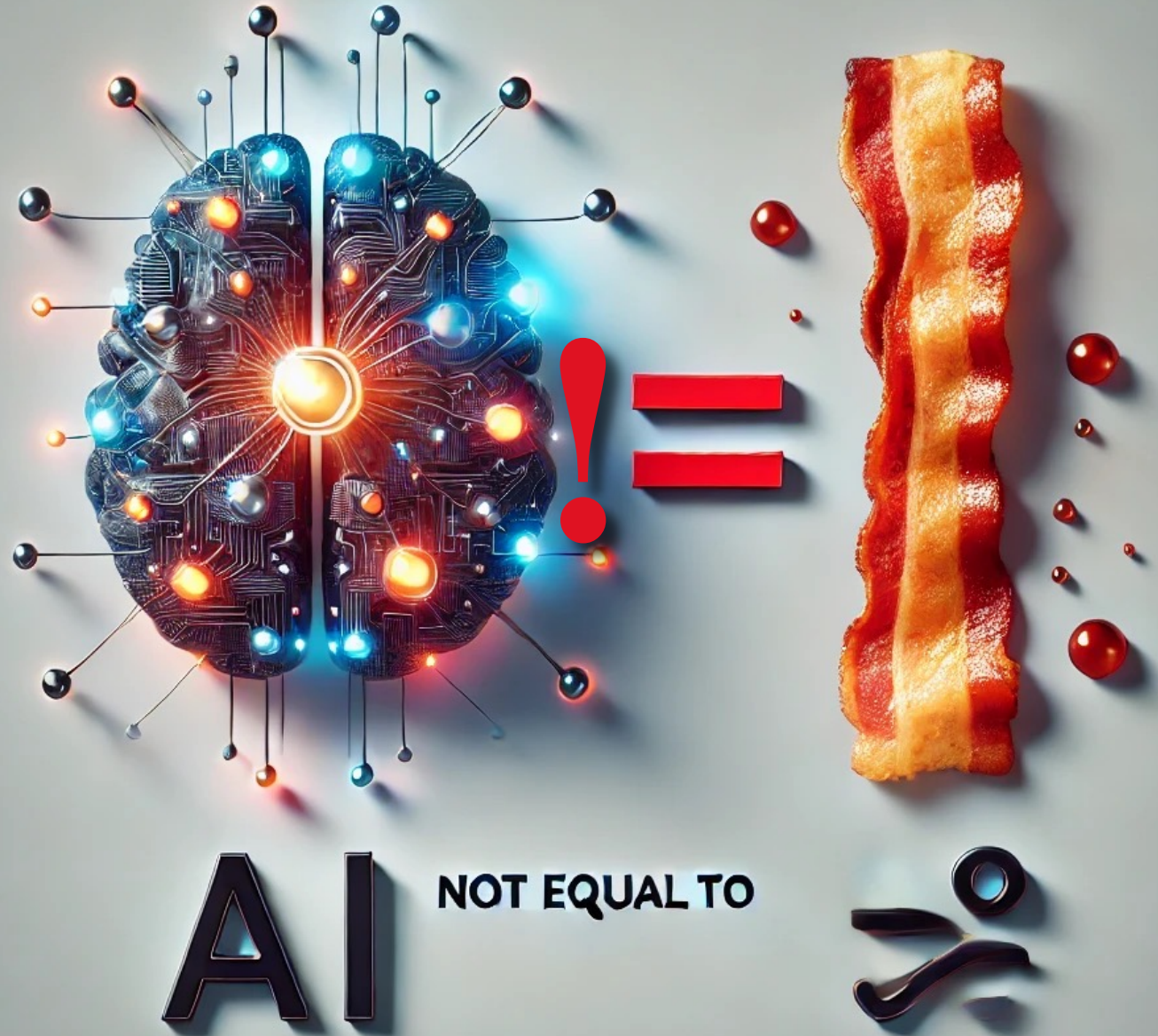
# Waveforms != Synchrophasors

- Its not that hard!
- Comms + Data Platform
- Patterns from PMUs don't apply



# AI != Bacon

- Artificial Intelligence doesn't make everything better
- Don't forget Maxell
- Shiny Object Syndrome
- K.I.S.S.
- First Principles & Fundamentals





THE WORLD IS NOT A ZERO-SUM GAME



# We Can Grow the Pie

- Neither the industry nor this space is a zero-sum game.
- More collaboration between vendors is needed.



# Thank You!

Kevin D. Jones, Ph.D.

