




Current Institute Status

- America Makes – DoD (Prime) 
 - National Additive Manufacturing Innovation Institute (NAMII)
- Clean Energy Manufacturing Innovation Institute – DoE
 - Wide bandgap (WBG) semiconductor power electronic devices
- Digital Design and Manufacturing Institute (DMDI) – DoD
- Lightweight and Modern Metals Manufacturing Innovation (LM3I) Institute – DoD
- Light weight composites institute - DoE

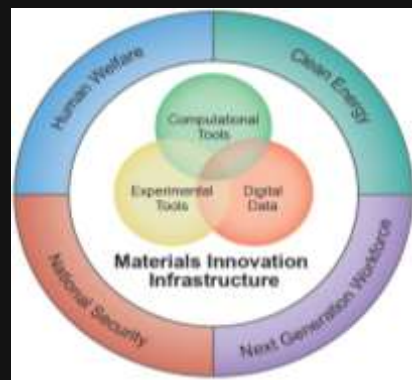


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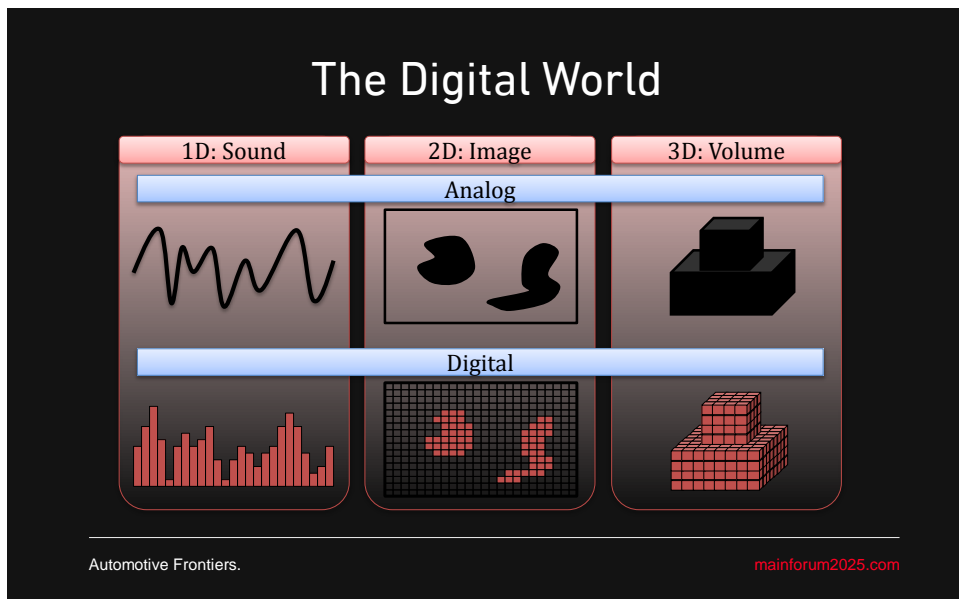
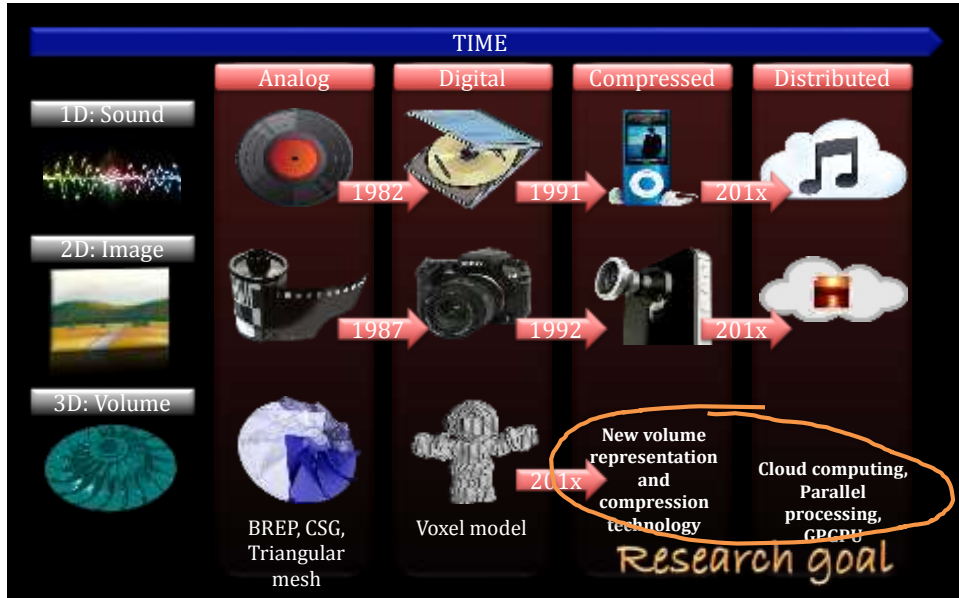
The Big Picture

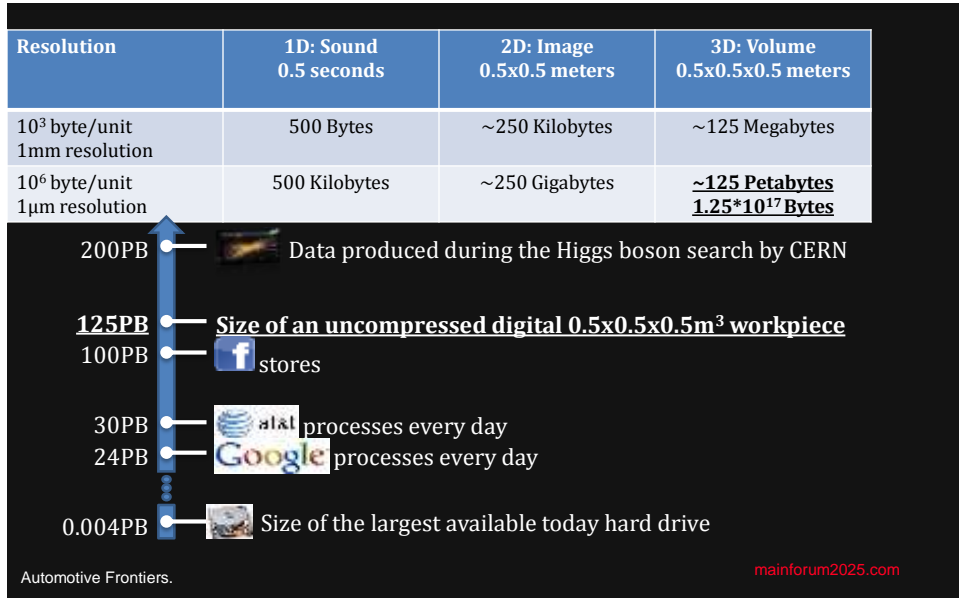
- Some major initiatives
 - Robotics Initiative
 - Materials Genome Initiative
 - Big Data
- NNMI
 - Getting technology to SME's
 - New models for work force dev.
 - New models for equipment usage
 - IP issues
- MEP
- Infrastructure
- HPC
- Cloud / Connectivity
- Trillions



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- True Digital Manufacturing
- Why stop at a part?
- Interoperability
- High performance computing
- Open source
- Highly accessible and repurposed hardware
- New business models
- Data = \$\$\$\$

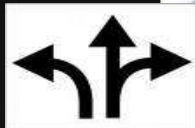
Nature Highlights Global Supply Chains



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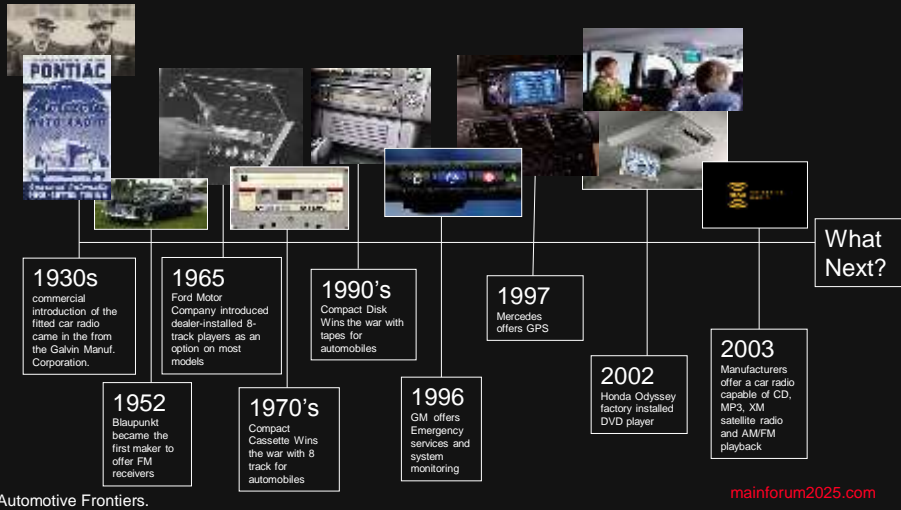
Changing Powertrain Technology



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History of Car Media – It is Accelerating!



The Winds of Change in a Digital World

- Design and manufacturing
- Thinking in a completely new fashion
- A new workforce foundation



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A Few Cold Realities

- Manufacturing is high tech
- SMEs (Jobs / Economy) – Supplier vs. OEM
- Speed to market
- Standards (process vs. product)
- Productivity is up (2X every 10 years)
- Green generating green
- Transportation costs
- The days of hard transfer lines are numbered
- Open source is going to rule



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Back to the Big Picture

- Wealth creation
- Enabling SME's
- Sustainability / efficiency
- A new workforce foundation
- New technical leadership for policy
- International Partnerships
 - Enabling innovation
 - Ensuring the talent pipeline
- The World – Engaging a Global Economy

“In times of change, learners inherit the earth; while the learned find themselves beautifully equipped to deal with a world that no longer exists.” (Eric Hoffer 1902-1983)



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