

The Lowest Common Denominator — and Its Untapped Upside: STEP Across the Supply Chain

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Who We Are

Who We Are

- Wholly owned subsidiary of Kubotek Corp., Japan
- Located in Marlborough, MA
- Over 20 years since inception
- U.S.-based development team
- Active in standards groups and industry organizations

What We Do

- Independent developer of geometry software technology
- Focused on precision, performance, and integration for engineering solutions

Who We Serve

- Engineering Software Developers
- Manufacturing Sector
- OEMs
- Design Engineers



Modeling & Translation Kernel ::: 3D Framework

Cloud-ready, high-performance 3D geometry kernel licensed to other specialized engineering developers

Direct CAD ::: KeyCreator

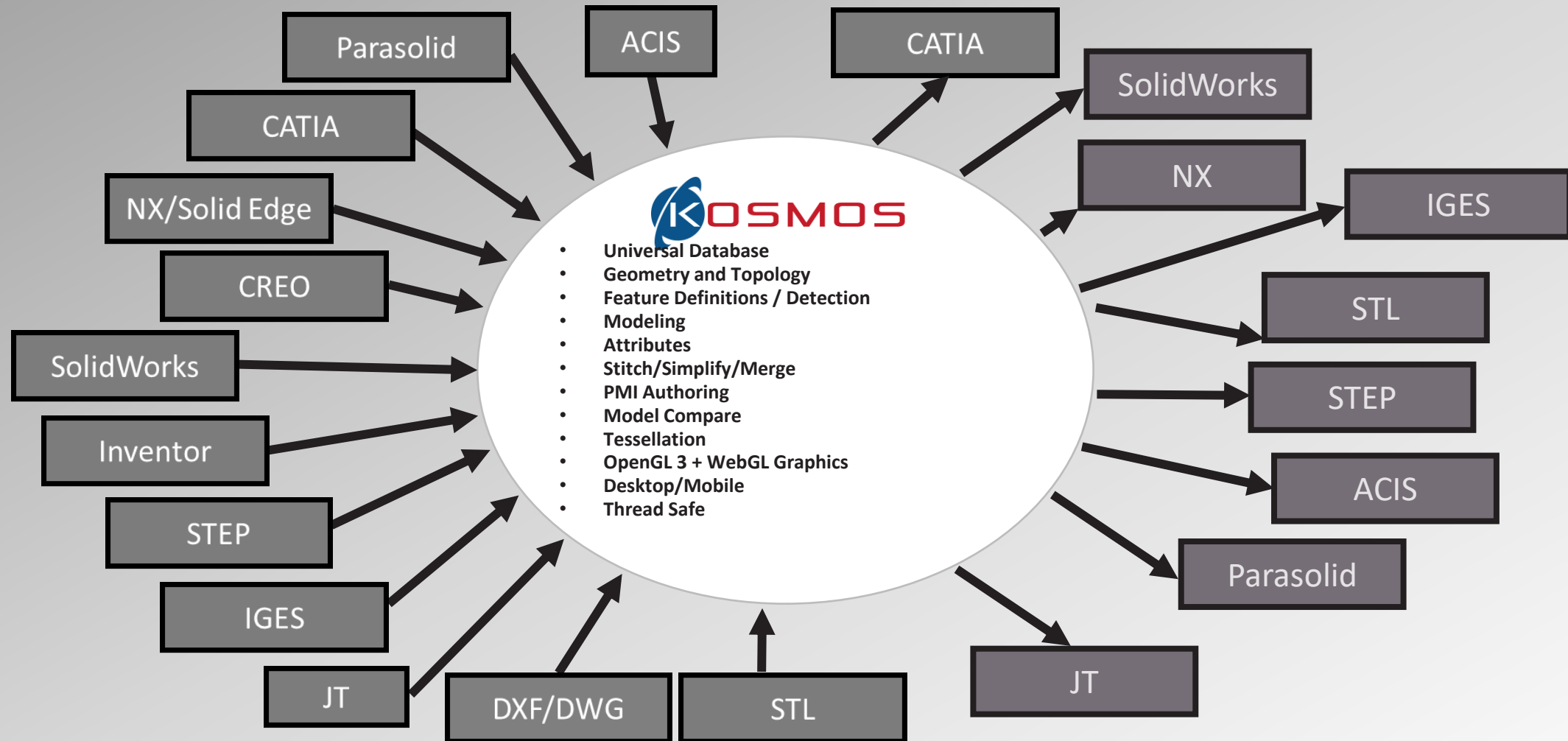
Full professional CAD favored in manufacturing & concept design settings (Framework translators)

MBD / CAD File Utilities

Specialized multi-device utilities focused on aerospace manufacturing, MBD workflows (built on Framework)



Kubotek Kosmos 3D Framework



STEP in the Supply Chain ::: Reality and Opportunity

What the supply chain is telling us

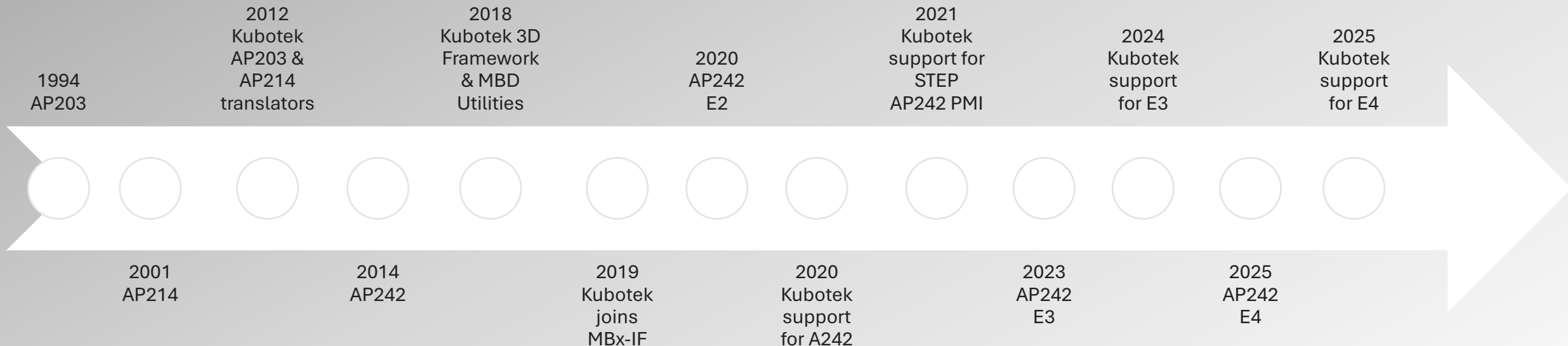
- Treated as the lowest common denominator
- Several derivatives shipped at once
- Uneven support across AP203/214/242
- Gaps from differing support and licenses
- Recommended practices often skipped

Opportunities

- Long-term archival that outlives the authoring CAD
- Beyond B-Rep: PMI, composites, kinematics, XML
- Multiple APs for domain-specific exchange
- Open format suits AI — no lock-in
- A strong alternative to STL in additive

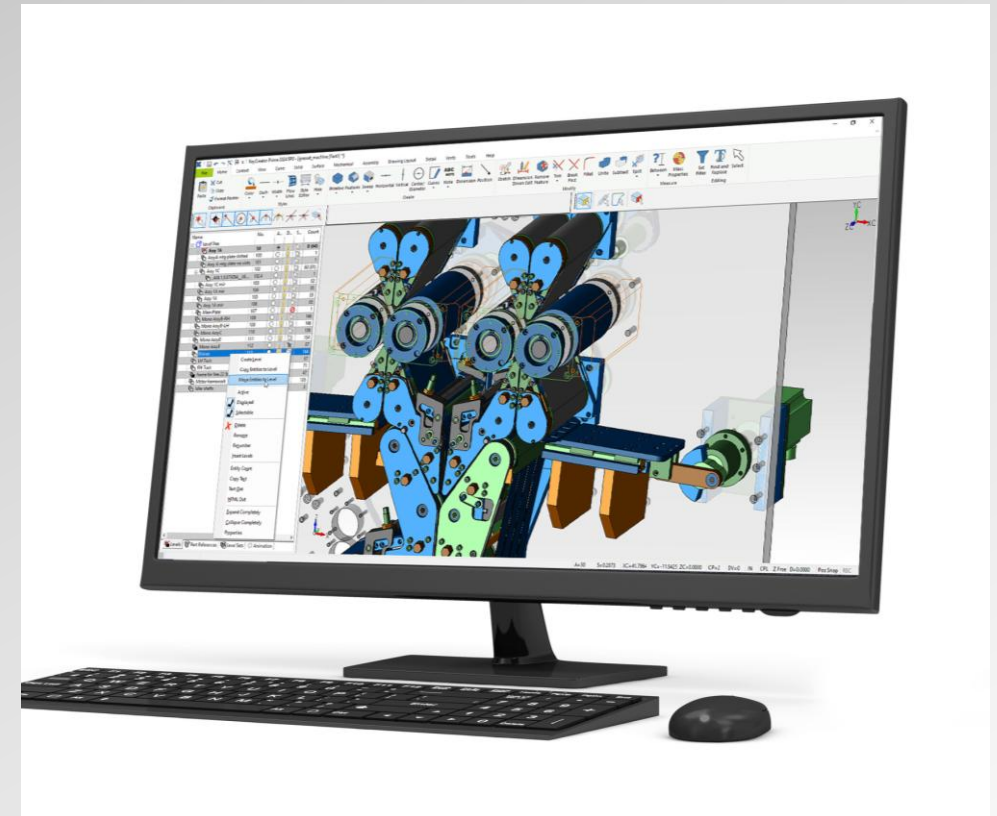
Our stance: format-neutral. STEP and JT both carry real supply-chain workloads — we support both, and participate actively in STEP forums so derivatives keep the engineering intent.

ISO STEP and Kubotek Support Timeline



Direct CAD ::: KeyCreator

- Direct Modeling CAD for Manufacturing
- Conceptual Free-form Design
- 3D Modeling and 2D Drawing support
- Fix Broken Models Instead of Complete Re-Build
- Simplified File Management

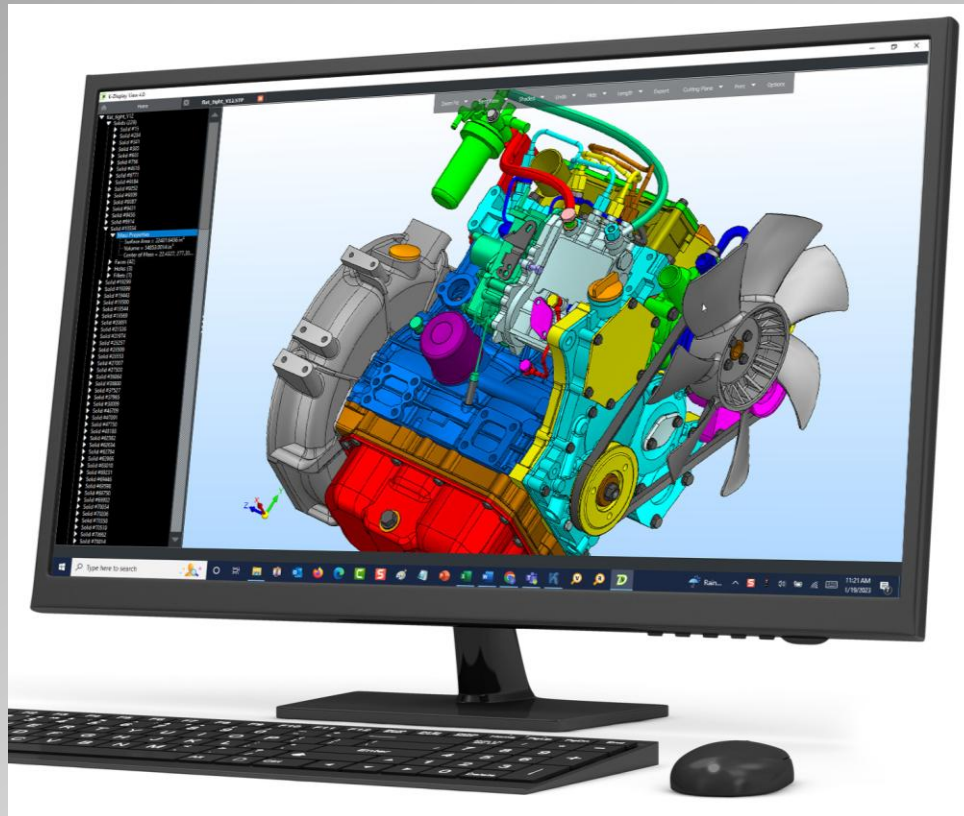


Kernel/SDK ::: 3D Framework



- **Software Libraries for Specialized Applications**
- Geometry Kernel with Native MBD support
- Graphics Engine (OpenGL and WebGL)
- Neutral/Kernel/Native Format Translators
- STEP AP242 Ed. 4 persistent IDs, STEP XML & QIF
- Dimensioning module to author/edit PMI
- Model Comparison
- True Multi-Threading Performance
- Cloud-Ready, Multi-Platform Compatible
- C/C++, .NET Core (C#), Python, JavaScript

MCAD Visualization & Translation



- **View**

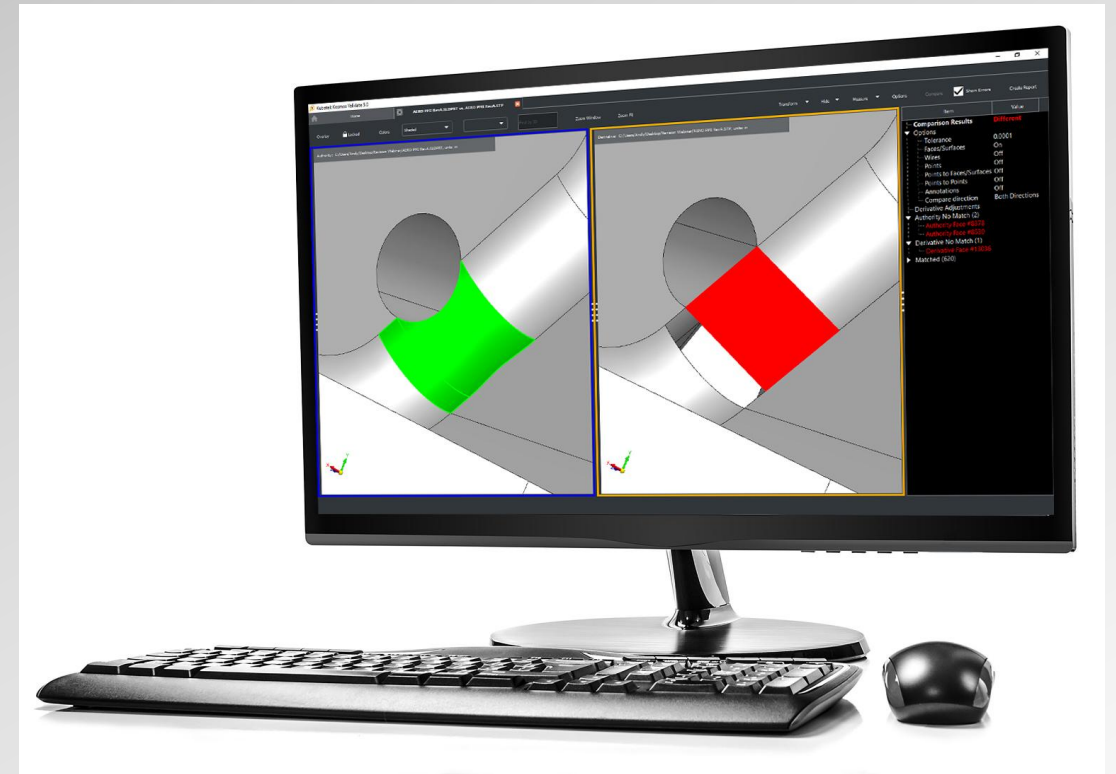
- Read STEP AP242: 3D, PMI (Graphical & Semantic), Saved Views
- Analysis Tools – Feature Recognition, Tessellation/Visualization of 3D data, Measurements (Mass Properties, Distances, Thickness, Draft Angle Analysis, Bounding Box, Auto BOM)

- **Convert**

- Converts native CAD to STEP AP242

Validate: CAD File Discrepancy Report Software

- Authority CAD to derivative STEP AP242
- Translation validation of MBD data
- Traceable & tamper proof quality document



Revision: Engineering Change Report Software



- Feature Detection
- Auto-Generate Report on Assembly & MBD Changes
- Reporting with 3D Views & Markup

STEP AP242 Current Capabilities & Roadmap

Current Capabilities

- Read and Write of:
 - 3D Geometry
 - Graphical/Semantic PMI
 - Part 21 Assembly Structure (including external references)
 - Model Styling
 - Alternate Shapes
- Read STEP XML assembly structure and external file references
- Read/Write Placeholder PMI
- Semantic Holes
- Persistent IDs

New Areas

- Composite Read
- Surface Texture

In Progress

- Assembly PMI – Part 21 and XML



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Thank you for
your time,
your energy,
and your invaluable insights.