Product Data eXchange
Overview and Adoption

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**PDX - History**

**Factory Information Systems TIG**

**Plug & Play Factory**
- Created framework for standardization with IPC
- Made commitment to XML
- Kicked off suite of IPC standards for shop floor integration

**Virtual Factory Information Integration Project**
- Initiated PDX suite of standards for Supply Chain Communication
- Forged liaison with RosettaNet

**Data Exchange Convergence Project**
- Addressing industry stalemate in adoption of CAD exchange standards
- Initiating standard activity based on project results

*Connect with and Strengthen your Supply Chain*
What is PDX?

- A simple standard
- Developed by NEMI team with broad industry participation
- Published by IPC
- XML format
- Used to exchange BOM, change order, as-built configuration & quality information.
<table>
<thead>
<tr>
<th>Standard Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>IPC 2571</td>
<td>Requirements for Product Data eXchange Standard</td>
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<tr>
<td>IPC 2571 DTD</td>
<td>Combined DTD for the IPC 2571, 2576, 2578</td>
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<tr>
<td>IPC 2576</td>
<td>Sectional Requirements for the Supply Chain (B2B) Communication of As-Built Product Data (Genealogy) Standard</td>
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<tr>
<td>IPC 2577</td>
<td>Product Manufacturing Quality Exchange Final Draft</td>
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<tr>
<td>IPC 2578</td>
<td>Sectional Requirements for Bill of Materials Data eXchange (PDX) Standard</td>
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</tbody>
</table>

Connect with and Strengthen your Supply Chain
## IPC 25xx Series of Data Exchange Standards

<table>
<thead>
<tr>
<th>IPC Number/Function</th>
<th>-xxx1 Generic</th>
<th>-xxx2 Administ</th>
<th>-xxx3 Document</th>
<th>-xxx4 Board Fab</th>
<th>-xxx5 Bare Bd Test</th>
<th>-xxx6 Assembly Manufact</th>
<th>-xxx7 Assy Test/Insp.</th>
<th>-xxx8 Comp. &amp; Mat'l's</th>
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<tbody>
<tr>
<td>IPC-2500 CAMX Framework</td>
<td>IPC-2501 Published</td>
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<tr>
<td>IPC-2510 GenCAM Product Data</td>
<td>IPC-2511A Published</td>
<td>IPC-2512A Published</td>
<td>IPC-2513A Published</td>
<td>IPC-2514A Published</td>
<td>IPC-2515A Published</td>
<td>IPC-2516A Published</td>
<td>IPC-2517A Published</td>
<td>IPC-2518A Published</td>
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<td>IPC-2520 Quality Product Data</td>
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<td>IPC-2524 Published</td>
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<td>IPC-2530 SRFF Process Data</td>
<td>IPC-2531 ANSI Draft</td>
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<td>IPC-2540 Shop Floor Communication (CAMX)</td>
<td>IPC-2541 Published</td>
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<td>IPC-2546 Published</td>
<td>IPC-2547 Published</td>
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<td>IPC-2550 Execution Communication (MES)</td>
<td>IPC-2551 Working Draft</td>
<td>IPC-2554 Working Draft</td>
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<td>IPC-2556 PIN Submitted</td>
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<td>IPC-2560 Enterprise Communication</td>
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<td>IPC-2570 Supply Chain Communication (PDX)</td>
<td>IPC-2571 Proposed Std</td>
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<td>IPC-2576 Published</td>
<td>IPC-2577 Final draft</td>
<td>IPC-2578 Published</td>
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<td>IPC-2580 Application Specific Data</td>
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*Connect with and Strengthen your Supply Chain*
A Standard BOM - A Closer Look

Connect with and Strengthen your Supply Chain
A Standard BOM - A Closer Look

Connect with and Strengthen your Supply Chain
IPC 2577 - Communication of Quality Product Data

Supports 4 Quality Exchange Scenarios

• Set-up and Update
  – Key data codes and descriptions
  – Establishes expected reporting requirements
• Incident Management
• Regular Reporting
• Repair / Failure Analysis

Status

• Released as IPC Final Draft
• Expected to be published as a Standard this spring

Connect with and Strengthen your Supply Chain
PDX Status: Integration With Other Standards

Integration with RosettaNet
Status:
- Currently integrated

Open Actions (for Future Versions):
- Integrate 2577 with PIP 7C6 version 1.2 once its complete
- Collaborate on BOM-level tracking of environmental information

Integration with Other IPC Web Standards
Status:
- Discussions with 2581 team held; no structural incompatibilities between 2581 and PDX found

Open Actions:
- Generate report detailing how to map between PDX and 2581, once 2581 is mature
- Transition PDX from XML DTD to XML Schema
- Review entire matrix for compatibility, harmonization

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PDX Adoption

Lucent

• Uses PDX for all exchanges that don’t involve direct CAD access

• Monthly average:
  – 565 Outbound PDX Exchanges (approximately 95% of all outbound transactions)
  – 75 Inbound PDX Exchanges (approximately 65% of all inbound transactions)

Hewlett Packard

• Active PDX exchanges, via RosettaNet 7C6, with 5 service providers supporting quality/repair data

• Anticipating 500,000 to 750,000 incoming 7C6 transactions per month
PDX Adoption

Agile Software

• Offer free PDX viewer
  – Over the last year, 2,666 distinct users downloaded the PDX viewer

Celestica

• Since 10/03:
  – 2,019 PDX file transmissions
  – 16 unique customers conducting exchanges