



ECIX

Electronic Component Information Exchange

D.R. Cottrell
cottrell@si2.org

What is ECIX

- **Open standards to enable unambiguous exchange of electrical component information**
 - Complete Component Information Model
 - Comprehensive dictionary of component properties
 - Computer sensible timing diagrams
- **Between component information suppliers and their end-users**
- **XML based for computer sensibility**
- **Supporting SOC through PCB level packages**



What is QuickData

- XML-based eBusiness exchange protocol
- Supporting “Give me what I want, When I want it” paradigm
- Supporting Query filtering
- Supporting multicast queries
- Dictionary driven messages for fullest extensibility
- Using standard internet protocols



Typical ECIX/QuickData Use Cases

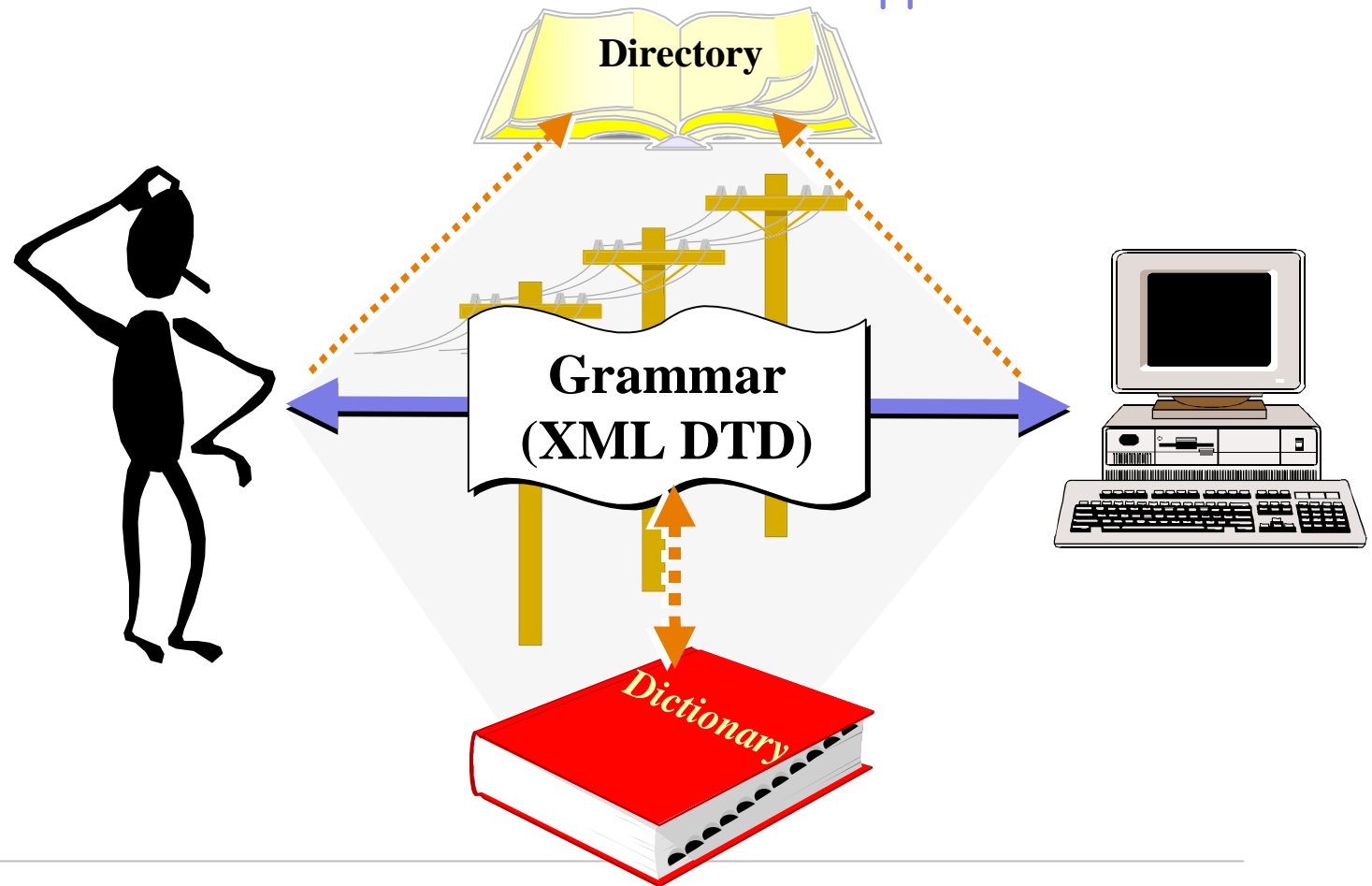
- **Consumer**
 - Single interface to parts information - internal to company and to suppliers worldwide
 - Locate parts to use meeting specified criteria
 - Get requested information specific parts on demand
 - Automate transfer of part information into local systems
- **Supplier**
 - Automate responses to part data requests
 - Base responses on requestor relationship
 - Single format for all customers
 - Target change information accurately



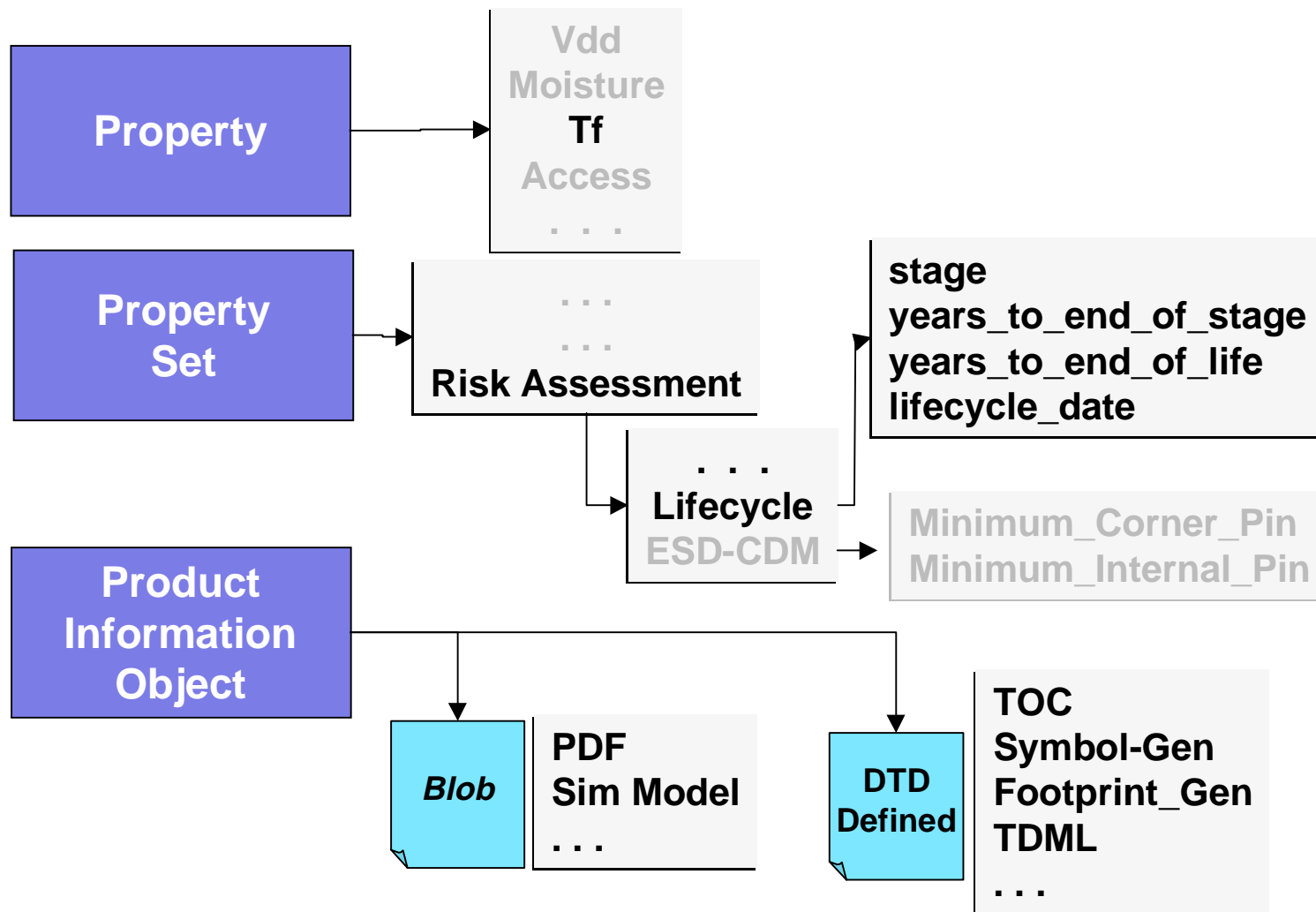
ECIX QuickData

Customers' Environments

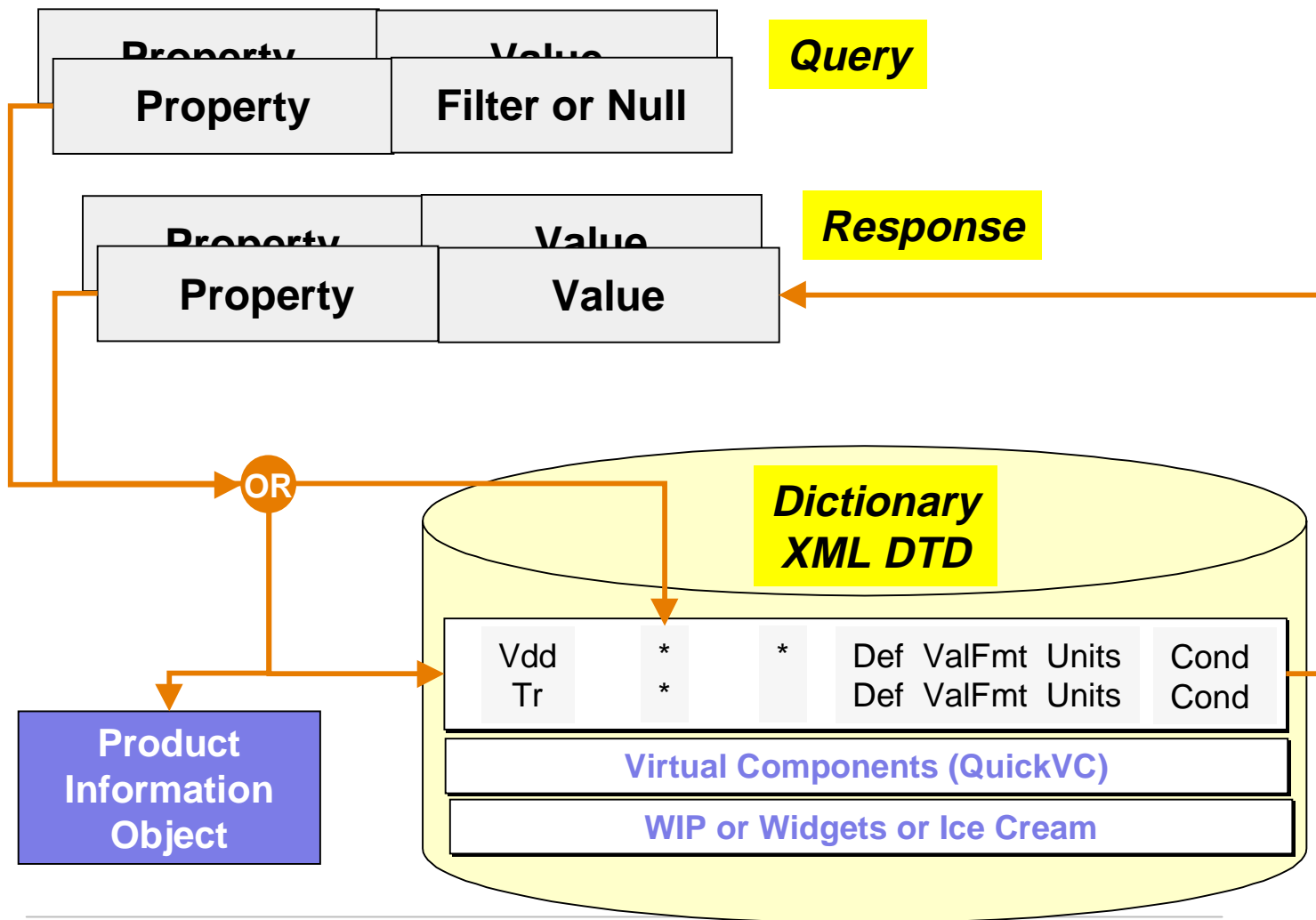
Suppliers' Environments



QuickData EC Information



Dictionary Driven Extensibility



Registry

- **Identifies Participants (players)**
 - e.g., company name, URL, contact
- **Identifies Roles**
- **Identifies Domains of Use**
- **Binds participant(s) to use models, dictionaries**

- **Example Registry data:**



Supplier	DUNS #	Contact	Role	QD version	App Domain	URL
Motorola	867385940	(512) 342-2244 x 34	supplier	QD 1.0	QED 1.0	http://herbie2.si2.org/cgi-bin/qdQueryHandl
TI	123456789	(512) 342-2244 x 34	supplier	QD 1.0	QED 1.0	http://herbie2.si2.org/cgi-bin/qdQueryHandl
TI-DSP	123456788	(512) 342-2244 x 34	supplier	QD 1.0	QED 1.0	http://herbie2.si2.org/cgi-bin/qdQueryHandl
Motorola-Logic	867385941	(512) 342-2244 x 34	supplier	QD 1.0	QED 1.0	http://herbie2.si2.org/cgi-bin/qdQueryHandl
Si2	621911718	d@si2.org	supplier	QD 1.0	QED 1.0	http://herbie2.si2.org/cgi-bin/si2supplier.pl

Registry Window

Get Current Registry | Select All | Deselect All | Apply & Close Window

ECIX Architecture Summary

- **Only interchange protocols are specified**
 - Customer/supplier formats remain proprietary
- **Customer selected requests**
 - TOC, Object, Property Set, Properties
 - Query by name or logical and relational expressions
- **Bi-directional - Pull and Push**
- **Dictionary - Ensures Sensibility,
Provides Extensibility**
- **Registry - identifies compliant participants**
 - Machine sensible status codes, property/class semantics



RosettaNet

- **RosettaNet**
 - Business Consortia for the IT and EC supply chains
 - Define and implement open and common Partner Interface Processes (PIPs) for business transactions
 - Designed to align the electronic business interfaces between supply chain partners for IT and EC

- **ECIX**
 - Technical Consortia for EC supply chain
 - Define open standards for electronic exchange and use of component information, across the entire *find-try-design-buy-build* lifecycle, between EC supply chain companies



Partner Interface Process



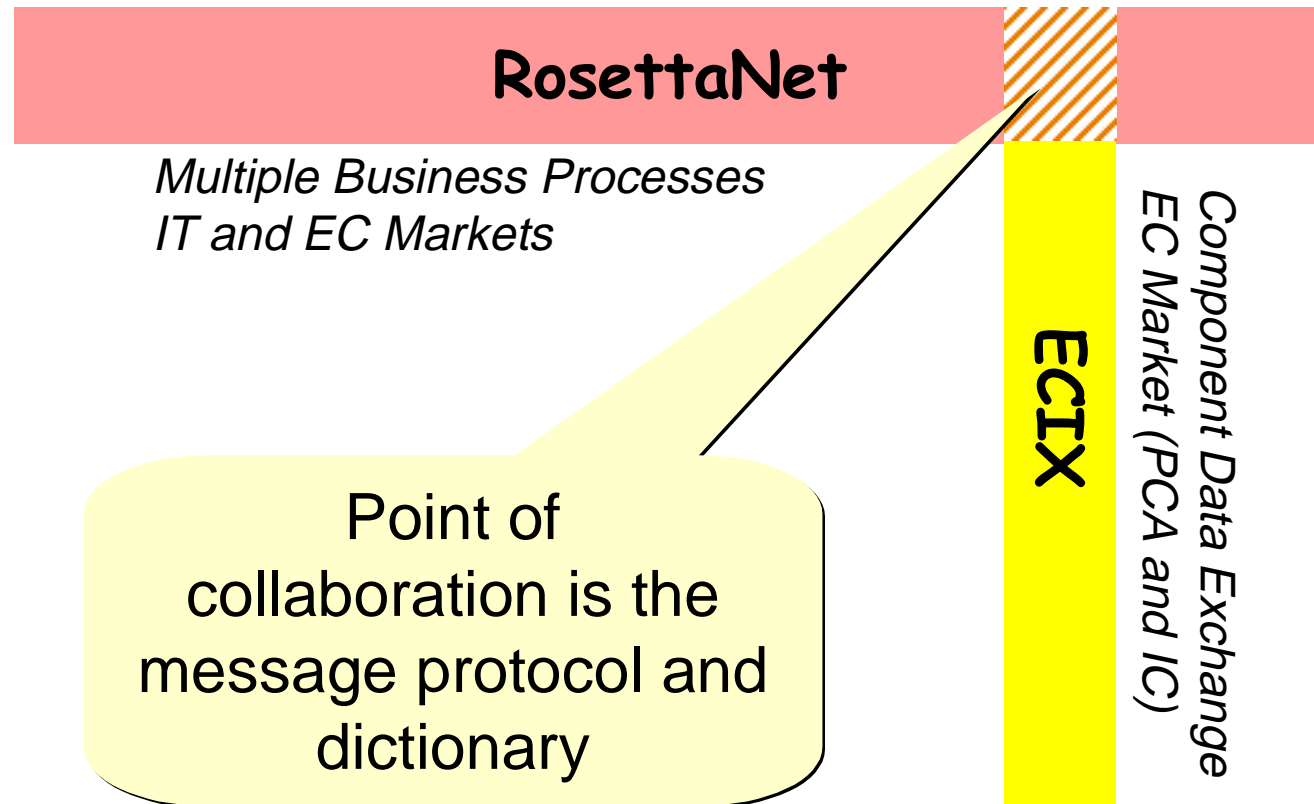
PIP: specification of services between two partners in the context of a **business process**, the **flow of transactions** and **messages**, and the **data properties** within these messages



PIP Clusters

- Partner/Product Review
- Product Introduction
- Marketing Information Mg't.
- Order Management
- Inventory Management
- Service & Support

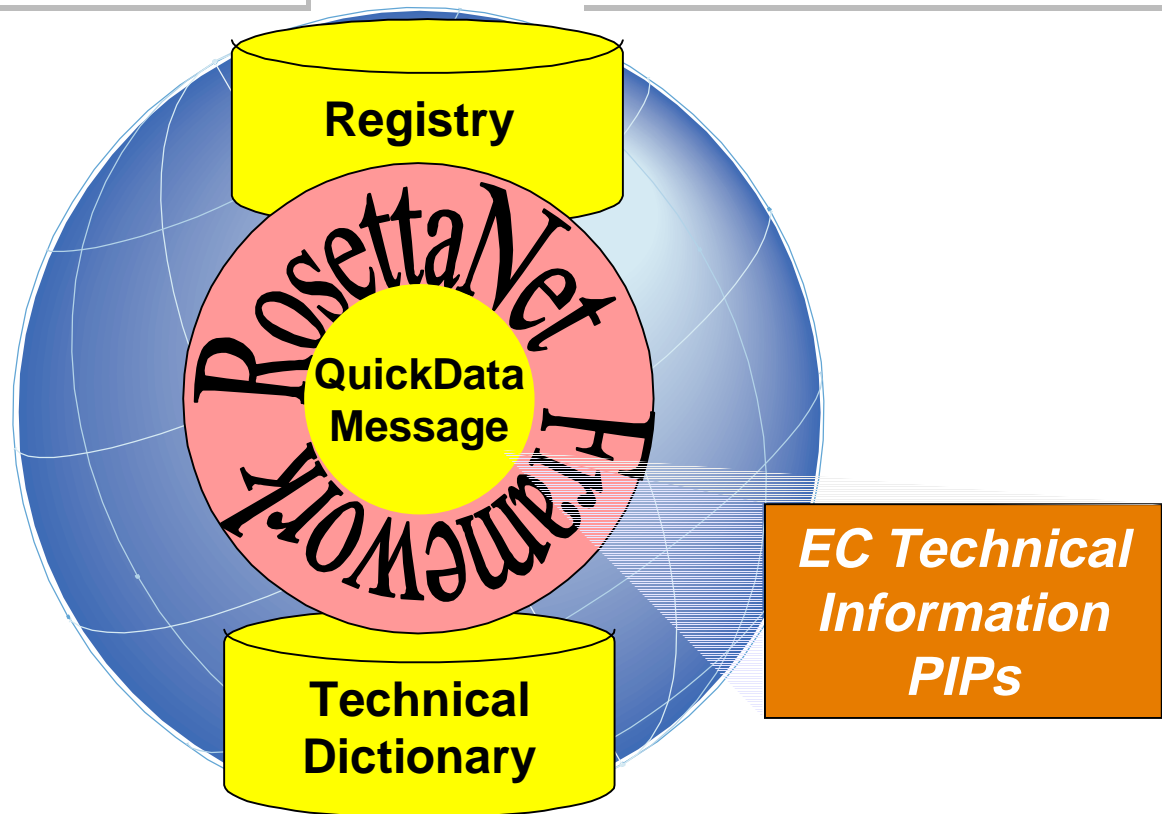
ECIX and RosettaNet



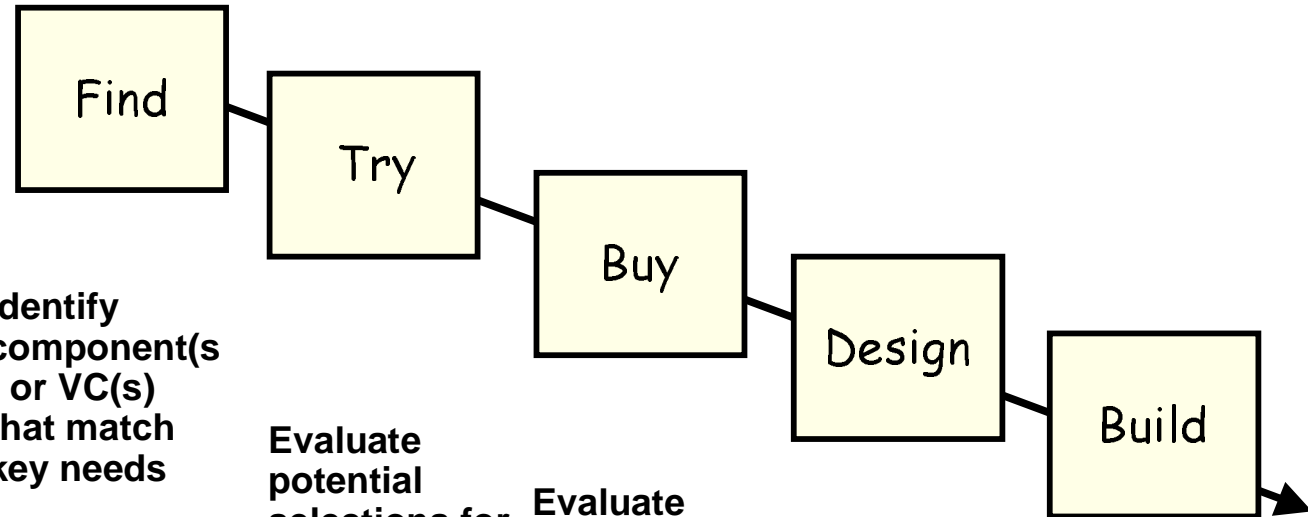
ECIX QuickData Within RosettaNet

Customer Environment

Supplier Environment



ECIX Effect



Identify component(s) or VC(s) that match key needs

Component classification and key parameters are essential in this phase

Evaluate potential selections for fit to design problem

Simulation models, test benches, PDFs (datasheets) and other SLD design files are important in this phase

Evaluate constraints

Price/Volumes, delivery dates, life-cycle data, and sample parts are important in this phase

Design using the selected component(s) or IP

EDA Design Libraries are crucial in this phase

Build and test the product PCA or SoC

Supply Chain Management crucial in this phase