"The Software Industry is Not Industrialized"

Speaker: Noel Lovisa

Doug McIlroy 1968
Reversing Integration Responsibility

Binary
Reversing Integration Responsibility

Binary
Reversing Integration Responsibility

Binary

Glue code
Appended parts

Ref
Reversing Integration Responsibility

Feature seamlessly integrated

Binary
Reversing Integration Responsibility

Practical feature seamlessly integrated

Binary
Reversing Integration Responsibility

Serious feature seamlessly integrated
Impediments to Industrialisation

- Apply a feature to 1,000s of projects
- Reverse Integration Responsibility
- Seamless integration policy
- Real time custom feature design
- Incomplete project contextualisation
Impediments to Industrialisation

- Apply a feature to 1,000s of projects
- Reverse Integration Responsibility
- Seamless integration policy
- Real time custom feature design
- Incomplete project contextualisation
- Global Extensible Classification Scheme
Impediments to Industrialisation

- Apply a feature to 1,000s of projects
- Reverse Integration Responsibility
- Seamless integration policy
- Real time custom feature design
- Incomplete project contextualisation
- Global Extensible Classification Scheme
- Global Remuneration System – 150 countries
Construction Site

Construction site protocol

Customer

Construction site connection

Supplier
Construction Site

Construction site protocol

Customer

Reserve space

Supplier
Construction Site

Construction site protocol

Physical address

Customer

Supplier
Construction Site

Construction site protocol

Customer

Deliver bytes

Supplier
Reversing Requirements Responsibility

- Degrees-of-Freedom (DoF)
- Operate only within DoFs
- Parameterised requirements
- Common practice in all other industries
Reversing Requirements Responsibility

Cooperating to determine requirements

Customer
Suppliers

Input
Result

Mul
Add
Reversing Requirements Responsibility

Cooperating to determine requirements

Result

Input

Mul

Add

Customer

Suppliers
Construction Site – Seamless Integration

Delivered binary fragment

Binary
Construction Site – Seamless Integration

Binary

Embedded part seamlessly integrated
Construction Site – Seamless Integration

Embedded part seamlessly integrated

Binary
Automation

- Increases productivity greatly
- Manage 1,000s of contracts simultaneously
- Participation in 1,000s of projects simultaneously
Agents

- Autonomous server program
- Conducts business on your behalf
- Accepts contracts
- Delivers outcomes
- Remuneration
Sub-Contracting

- Proper scaling of parts
- Your IP is still secure
- Agents are locally simple
- All agents uniform in complexity
Sub-Contracting

Construction site protocol

Supplier

Reserve space

Sub-contractors
Sub-Contracting

Construction site protocol

Physical address

Supplier

Sub-contractors
Sub-Contracting

Construction site protocol

Supplier

Deliver bytes

Sub-contractors
An Emerging Software Industry

- True development parallelism
- Complexity is an emergent property
- Actually simplifies software development
- Defects are rare and easily located
- Highly accountable
- Industry on a fast path of improvement
- Only technology capable of reliably delivering large scale projects
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