Codes, Standards, Criteria, Requirements – Rules of Exchange

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Scope:

- **Broader than Codes - "Criteria" (codes, standards, rules, practice guidelines, regulations) required to achieve interoperability**
- **Open platform ultimately in the exchange of information**
- **Not about optimization except to the extent that can be enabled by seamless exchange of information**
- **Checking of design, deliverables, operations - limits**
- **Model-based operations**
- **Different levels of C, S, C, R**
    - **Legal**
    - **Best Practices**
    - **Business Rules**
- **Based on activity in North America**

Current State: Where are we today?

- Limited automated checking of any models/codes/rules today – constrained rules based activity: steel and precast design, gsa space standards, some intl. activity
- Limited standards/codes/rules that a model could be checked against today
- Not all parties involved, e.g. code officials
- Un-codified best practices –
- Disconnected decision-making
- Some simulations/pilots taking place
- Human to machine exchange
- Protracted checking/approval processes
- Transportation in 1900 – before most roads

Desired State: Where do we want to be?

- Ability to submit a model to be checked
- Instant feedback on design compliance/performance
- Transparent access and application of rules and checks – no third party checking operation required
- Minimized manual activity, all calculation based compliance checking performed by applications
- Integration back to originating model from analysis/checking applications
- Codified best practices - regulations as well as unlegislated activity
- Integrated decision-making
- Optimized information exchange requirements to not clog exchanges with extraneous data - derivation vs. creation of information
- Limited restriction on creativity from standardization requirements
- Accelerated checks, approvals, tests for compliance
- Transportation in 2525?
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Action: What is the path to get there?

- Engage rule making organizations – state, local, federal governments, standard setting organizations, large owner/operator organizations with market power (e.g. hospitals, airports, serial builders)
- Support adoption of model-based tools to achieve base-line platform to build benefits on – widespread use
- Educate, Educate, Educate
- Prototype, Prototype, Prototype – FUND IT
- Commitment to continuous learning and advancement
- Commitment to development of new class of tools that automate checking and analysis of medels
- Build the Framework for achieving interoperability – support NBIMS and related activities
- Update our current practice guidelines to provide guidance
- Increasing Energy costs
- Support achieving sustainability and the GHG goals of A2030 – A Cause
- Build the roads like the military did for Transportation

Goal is to sort out who takes these steps:

Technical Standards Setting
Marketing Strategies