Is Clash Detection the final BIM deliverable?   A rethink of the Clash Detection - C-DRIVE

Clash Detection has been one of the core values of BIM whereby we can detect and report the clashes and make known to design and construction team well before the project is being started.

Detection Software like Navisworks can detect thousands of geometric collisions and turned into clashes in seconds. Tolerance can be set and improve in accuracy. Reporting of clash locations, numbers, and objects of clashed items are known easily. While the operation is easy, however, also brings along major unresolved problems:

1. Far too many clashes than any team member can handle. Thousands or even tens of thousands of clashes can be generated at any delivery interval.
2. The clashes are raw clashes that are undifferentiating – there are even more ignorable clashes than the real clashes eg. Large panel with small pipe running through
3. Clash detection programme are detached from the Authoring tool. The result of the clashes are not easily visible for amendment
4. Clash are not resolved, only reported. It left the design team to resolve the clashes, but no recording of any resolution. Next round of clash will then induced double counting of clashes.

This paper introduce a rethinking of the clash detection workflow by introducing the idea of **C-DRIVE:**

Clash **D**etection   – Detect all geometry clashes in federated models

Clash **R**eporting   – Report Clash results

Clash Pr**I**oritization   – Analyze significance of clash and prioritize them. Ignor unimportant clashes and concentrate on real clash

Clash **V**isualization   – Visualize the clash in the design authoring platform to facilitate easy location

Clash **E**limination   – Final removal of clash for real clash,

After all clashes can be detected, visualized and resolved, we can start with another level of thinking – why do we have to detect the clash if the design is clash free to start with? Can we have a Clash Free Design? That is a question