Topics from the Vienna preparation meeting

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Presented by Günter Steindl

Why do we need to identify and to define parameters that have to be supported and define or inform about related quantities?

- **Silicon vendors**
  - Need to identify the market needs
    - Bridge chip vendors (a few)
    - Bridged End-station chip vendors (a lot)
  - -> No company in the automation arena is able to inform all of the suppliers

- **Device vendors**
  - Need to identify the useful minimum values for their products
    - What Bridge or Bridged End-station chip fits?
  - -> No system builder in the automation arena is able to inform all of the suppliers

- **Industrial Communications Standards Organizations**
  - Define their Conformance Classes (required quantities) based on the IEC/IEEE60802 profile Conformance Classes
  - -> If the profile defines no useful quantities then the system builders select their own

- **Plant integrators / System builders / Customers (with in-house standards)**
  - Define their in-house Conformance Classes (required quantities) based on the IEC/IEEE60802 profile Conformance Classes
  - -> If the profile defines no useful quantities then customers select their own

-> If the profile doesn't define parameters and quantities, then the Industrial Communications Standards Organizations need to take over this job to ensure conformance for Bridges and End-Stations!
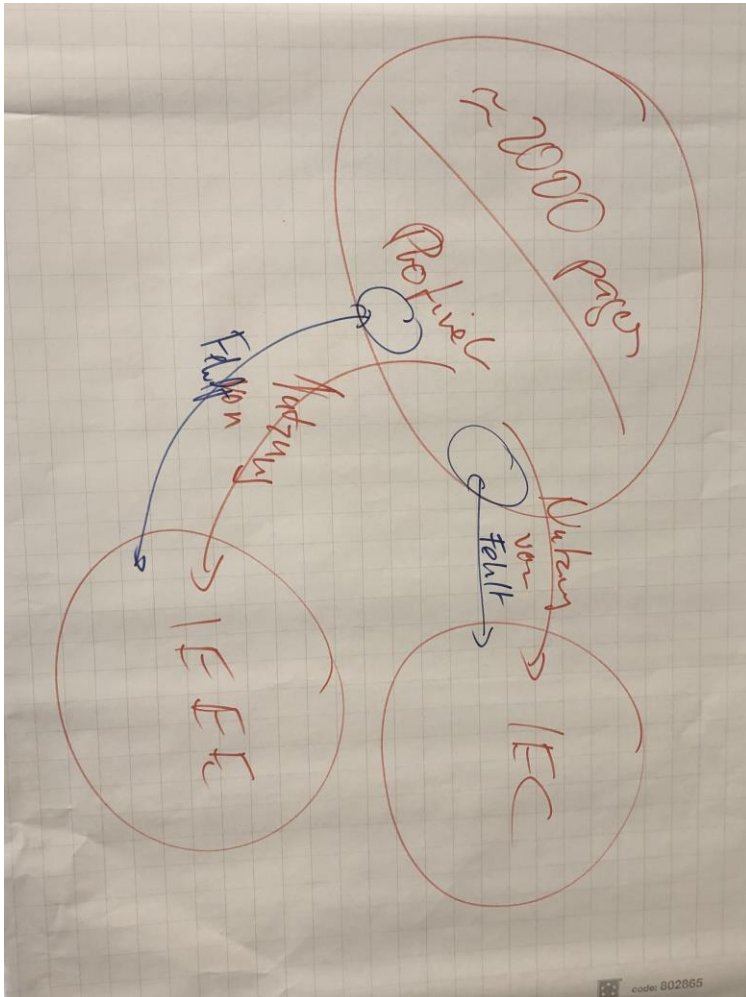
Why do we need to define parameters and values in a standardized datasheet?

- Offline configuration
  - Needed to fulfill this use case

- Offline calculation and simulation
  - Digital twin together with network simulation is an additional use case

- Device selection
  - What device is fitting for the chosen e.g. machine setup from the network point of view (e.g. 10Mbps are not enough)

- Bridge selection
  - What bridge is fitting for the chosen e.g. machine setup from the network point of view (e.g. 100Mbps are not enough; or 8192 streams are not enough)

-> Information from the datasheet need to be available offline and online

(see http://www.ieee802.org/1/files/public/docs2018/60802-industrial-use-cases-0918-v13.pdf)

Dependencies between standards

System builder

- driven industrial standards refer today to IEEE802, IETF and IEC standards.

- define the selection and the usage of features from the referenced standards based on „what is needed to solve the problem".

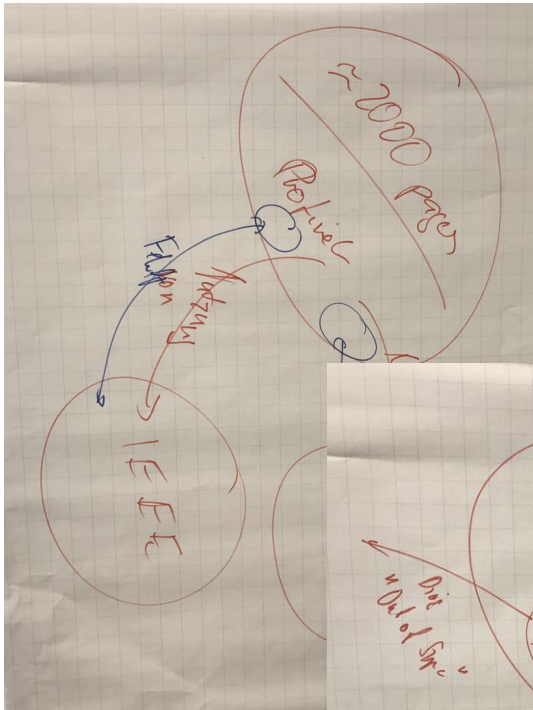- add missing features/functionality to fulfill customers requirements.

Particularly they define quantities if not available as reference.

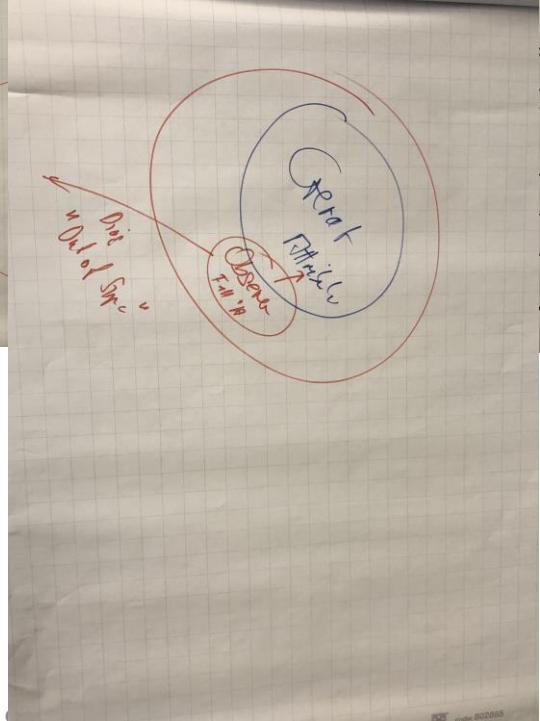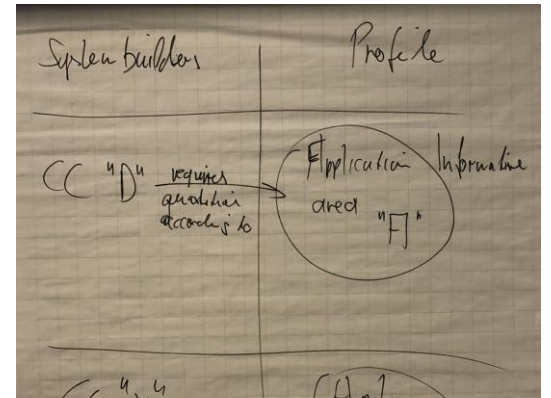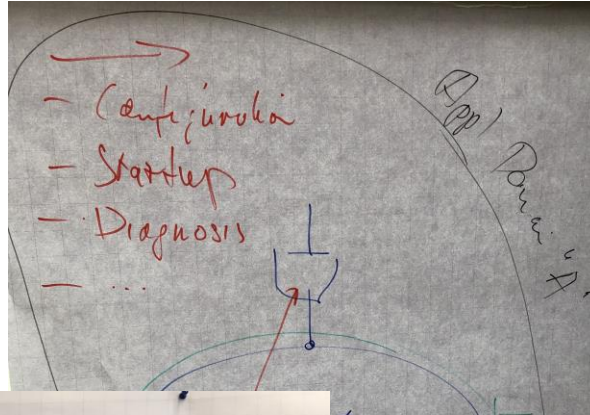An example quantity selection is shown in the following document.

See <60802-Steindl et al-ExampleSelection-0719-v05.pdf>

Different columns in the tables show the different selections based on different requirements.
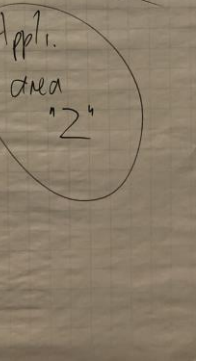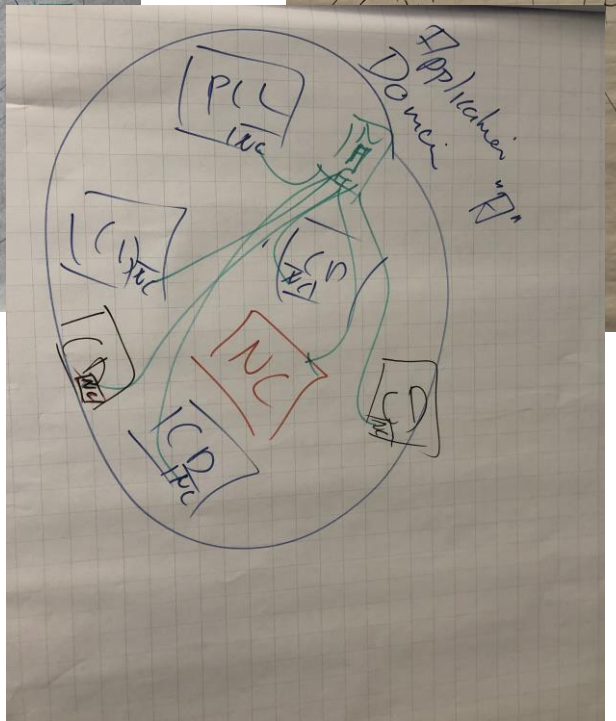
More topics discussed

Questions?