Metabolic Network Representation in SBGN PD: EC and Identity Gate

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- Proposed new shape for simple chemical
- Proposed new entity: functional gate (EC)
- Proposed new entity: identity gate

LABEL

Compound name inside shape

Compound name

Additional work is required in order to prepare abbreviation for each compound

It is going to be more difficult to read maps with abbreviations instead of common compound names

Proposed new shape for simple chemical entity

Steroid biosynthesis

EC is the most compact and informative way to show protein function on a metabolic diagram

EC is shown as a generic protein, that could symbolize a protein, or a multimer, or a complex

Inconsistency in visualization

Proposed new entity: functional gate

ambiguous

unambiguous

difficult to read

unambiguous

easy to read

Using identity gate instead of functional gate

Identity gate

ABOLIC RK

Potentially using identity gates might cause ambiguity

1A -> 2A
1B -> 2B
1C -> 2C

~~1A -> 2A
1A -> 2B
1A -> 2C
1B -> 2A
1B -> 2B
1B -> 2C
1C -> 2A
1C -> 2B
1C -> 2C~~

Possible solution: introducing restrictions

Only 1 identity gate on a map

Many unconnected inputs

1. New shape for simple chemicals
2. Proposed new entity: functional gate
3. Proposed new entity: identity gate

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