An XML-Based Model Description Language for Systems Biology Simulations

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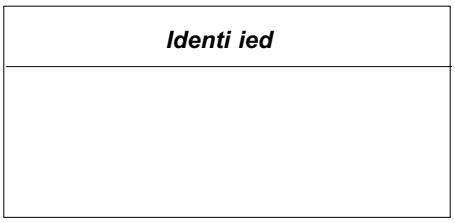

Identi ied

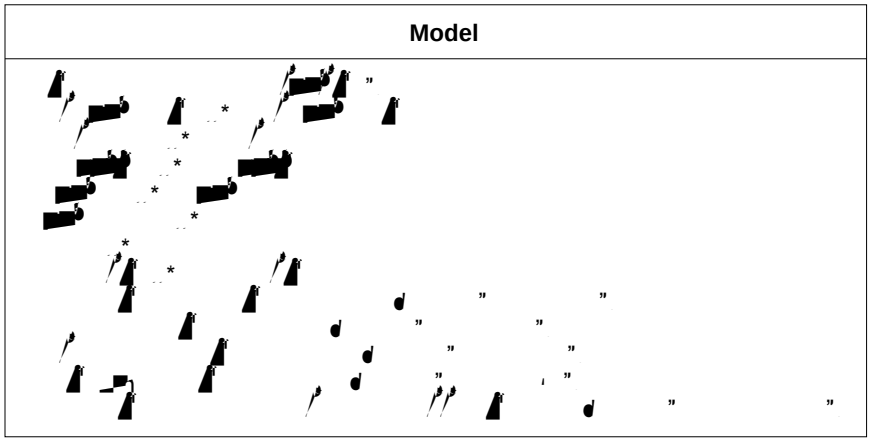


Figure 2: A diagram of `Model`.

De

Geometry

[illegible] ([illegible]).

substance/volume *Substance units*
volume units

3.8.2 Functions

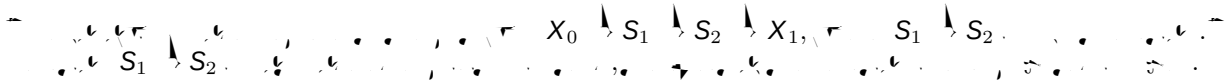
Appendix

A Using the XML Encoding of SBML

```
    </body>
</notes>
<lr2iz)fC*(+tmpartment>
```

```
                <listOfReactants>
                    <specieReference specie="s2"/>
                </listOfReactants>
                <listOfProducts>
                    <specieReference specie="x1"/>
                </listOfProducts>
                <kineticLaw formula="(vm*s1)/(km+s1)"/>
            </reaction>
        </listOfReactions>
    </model>
</sbml>
```

A.4 A Simple Example Application Using Rules



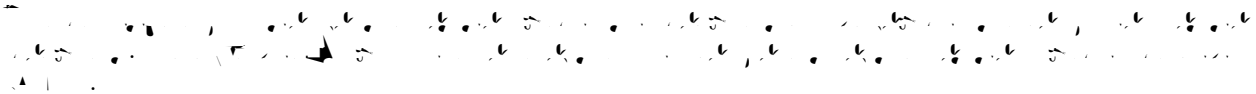
```
<sbml version="1">
    <model>
        <listOfCompartments>
            <compartment name="cell" volume="1"/>
        </listOfCompartments>
        <listOfSpecies>
```

B XML Schema for SBML

```
<xsd:complexType>
        <xsd:element name="geometry" type="Geometry"
```

```
            <xsd:selector>listOfSpecies/specie</xsd:selector>
            <xsd:field>@compartment</xsd:field>
    </xsd:keyref>
    <xsd:keyref name="specieReferenceToSpecie" refer="species">
            <xsd:selector>listOfReactions/reaction/*/specieReference</xsd:selector>
            <xsd:field>@specie</xsd:field>
    </xsd:keyref>
    <xsd:keyref name="specieRuleToSpecie" refer="species">
            <xsd:selector>llistOfRules/specieRule</xsd:selector>
            <xsd:field>@specie</xsd:field>
    </xsd:keyref>
    <xsd:keyref name="compartmentRuleToComparment" refer="compartment">
            <xsd:selector>llistOfRules/compartmentRule</xsd:selector>
            <xsd:field>@compartment</xsd:field>
    </xsd:keyref>
</xsd:element>
<xsd:attribute name="xmlns"/>
<xsd:attribute name="version" type="xsd:positiveInteger" use="required"/>
```

E Summary of Notation



	S_i, k		$v \quad k$

	S, P, A_c, V_f, V_p, K_{ms}, K_{mp}, K_a		v

References