XML Techniques in a distributed system with centralized access

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1

2

Subprojects

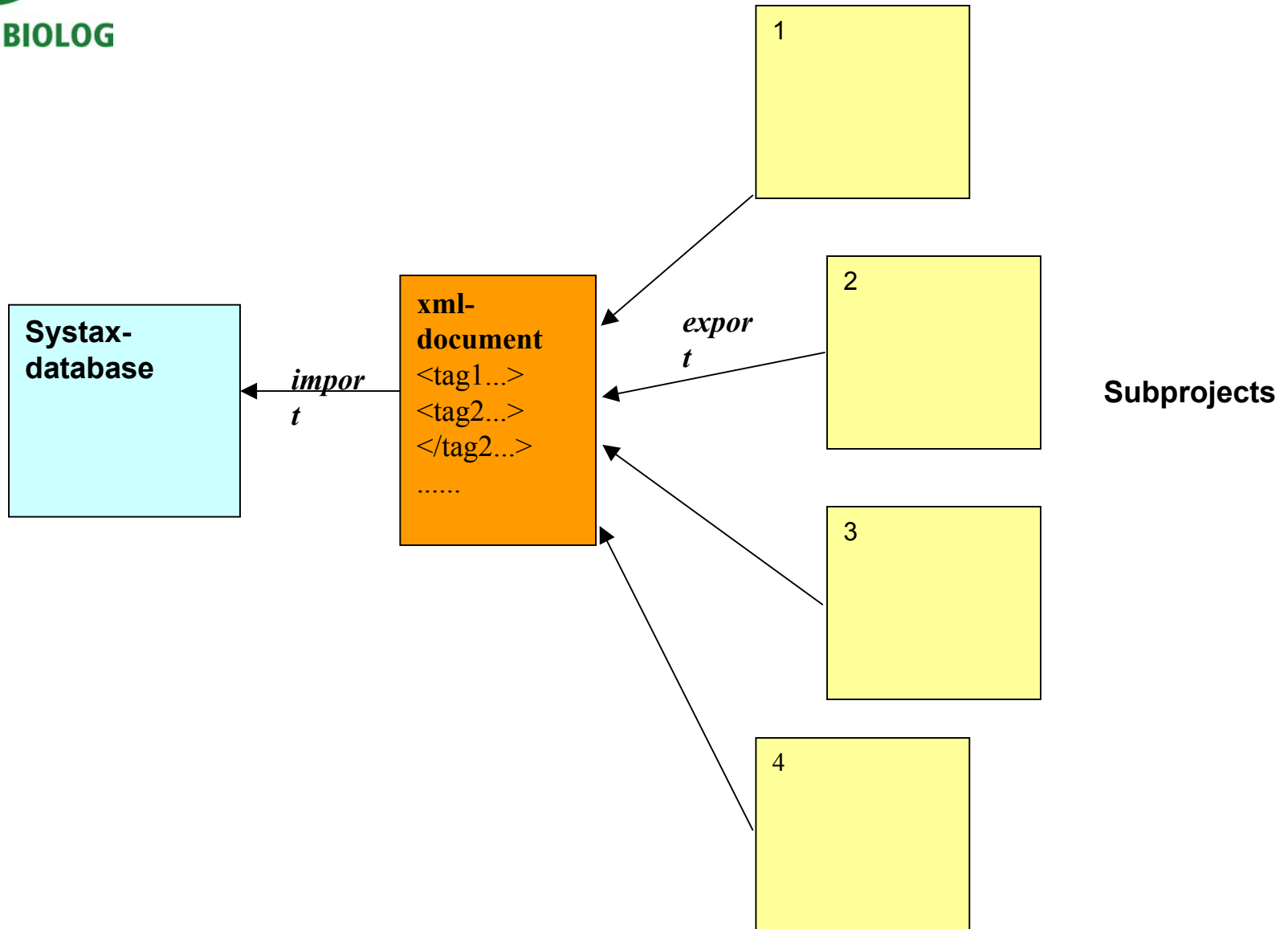**Systax-database**

3

4

Problems:

- Specialized content in every database
- Different structure of every database
- Used programs vary

Solution:

- Delimited text format
- XML (Extensible Markup Language)

Advantages of XML:

- Accepted www-standard
- Cross platform compatibility
- Standard Parser software to test integrity
- User readable
- Grammar definition as part of the document

```xml
<?xml version="1.0"?>
<TaxonData>
        <Deliverer DataDeliverer_ID ="Subproject_001 ">
                <DataDeliverer>Franz Maier</DataDeliverer>
                <DeliverDate>
                        <Year>2001</Year>
                        <Month>11</Month>
                        <Day>26</Day>
                </DeliverDate>
                <ResponsiblePerson>Sandra
Schmidt</ResponsiblePerson>
        </Deliverer>

        .....
</TaxonData>
```

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Systax-database

← *import* —

xml-document
<tag1...>
......

export

Subprojects

1

2

3

4

rules

schema

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DLR Environmental Research and Technology
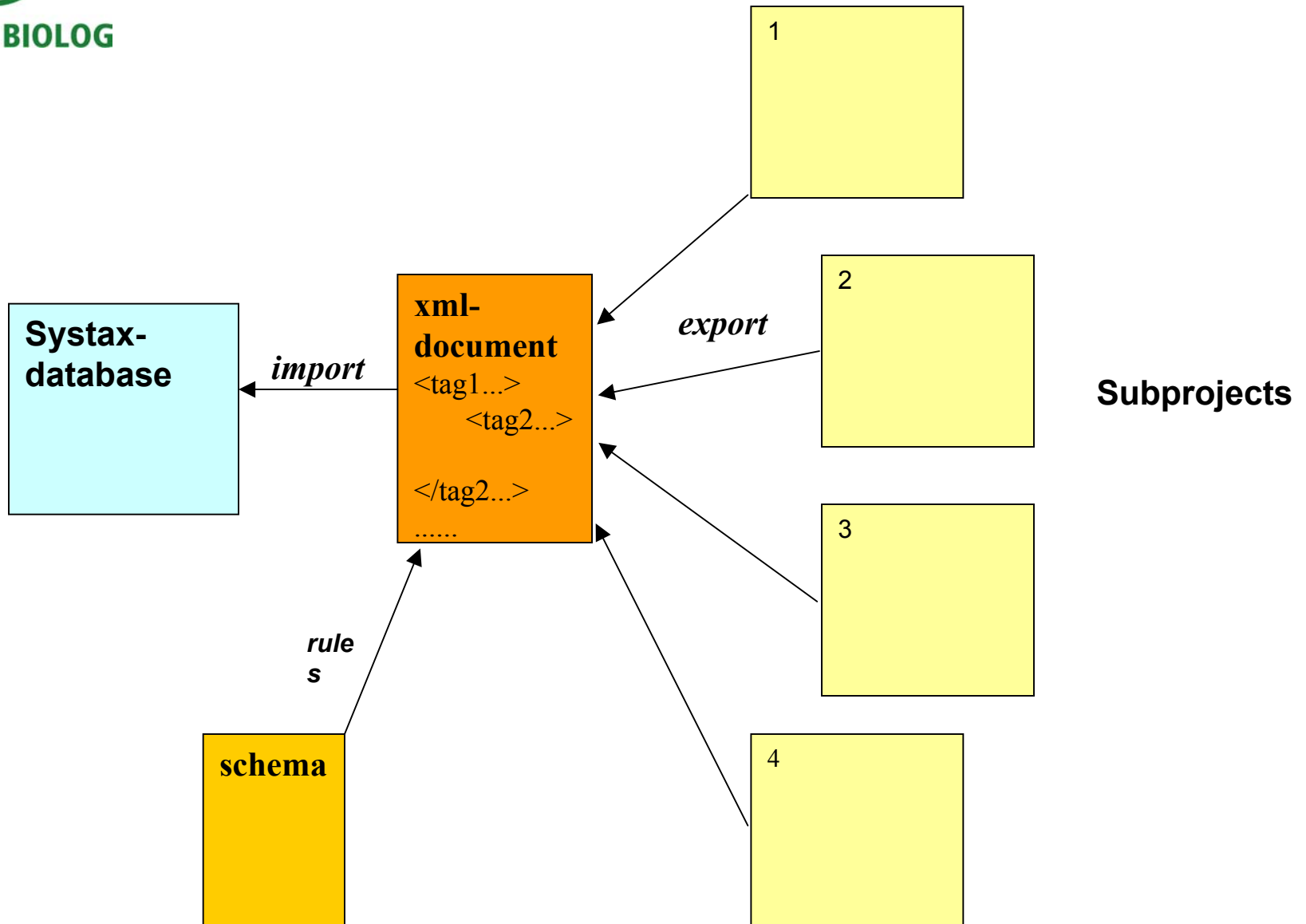
```xml
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:element name="TaxonData">
        <xs:complexType>
            <xs:sequence>
                <xs:element name="Deliverer">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="DataDeliverer" type="xs:string"/>
                            <xs:element name="DeliverDate" type="DateType"/>
                            <xs:element name="ResponsiblePerson" type="xs:string"/>
                        </xs:sequence>
                        <xs:attribute name=" DataDeliverer_ID" type="xs:string"
use="required"/>
                    </xs:complexType>
                </xs:element>
                .......
            </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:schema>
```