

# IODEF json-xml converter

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# Converter Overview

- Aiming to convert from JSON IODEF document to XML IODEF document, and vice versa
- Running code for latest JSON IODEF draft (draft-ietf-mile-jsoniodef-03)
- I'm currently implementing the converter including IETF Hackathon days in London

# Considered Approaches

## 1. Customizing OSS converter

- There exist many OSS converters and conversion libraries
  - json2xml, xml2json, xmltojson, x2j, j2x, etc.
- Suitable for simple conversion
- Difficult to implement custom mapping rules between JSON and XML

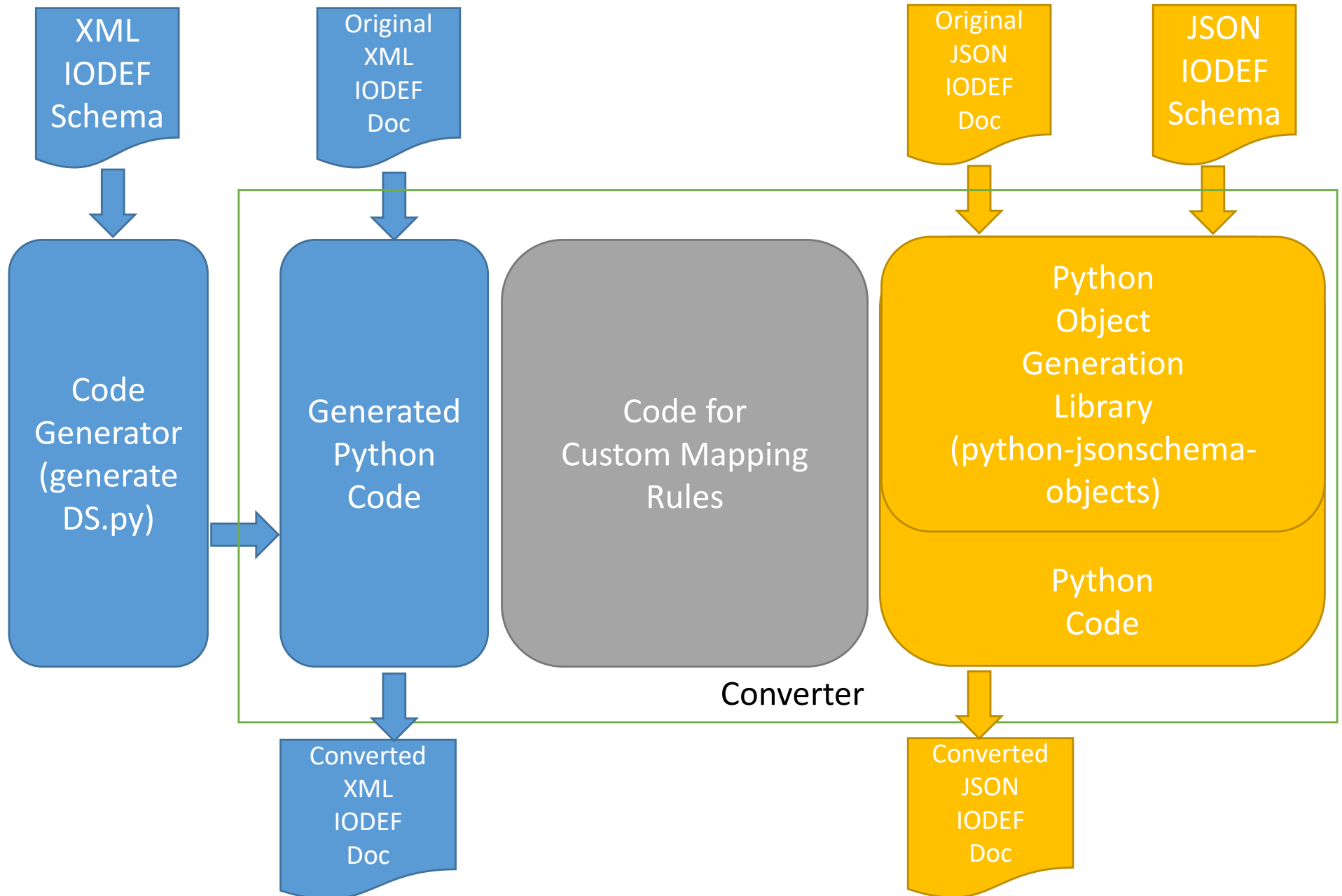
## 2. Using XSLT 3.0 fn:json-to-xml and fn:xml-to-json

- Described in <https://www.w3.org/TR/xslt-30/#json>
- Easy for simple conversion
- Enables custom mapping rules using XPath function but complex
- I'm not familiar with XSLT...

## 3. Making it own

- Implementing my own translator

# Converter Design



# Problems

- Object generator(python-jsonschema-objects) makes errors caused by self reference recursions
  - On “Contact”, “EventData”, and “IndicatorExpression” in IODEF JSON schema
  - Originated from IODEF XML Schema
  - Problem of implementation of python-jsonschema-objects?
  - It could cause errors on other generators/validators
- Related JSON schema snippet is described below

```
"Contact": {
```

(snip)

```
  "Contact": {  
    "type": "array", "items": {"$ref": "#/definitions/Contact"}},
```

(snip)

```
"EventData": {
```

(snip)

```
  "EventData": {  
    "type": "array", "items": {"$ref": "#/definitions/EventData"}},
```