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Using Arelle for ESRS

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Arele Overview

- Arelle is a free and open source XBRL platform that was created in 2010 to improve the accessibility and usability of XBRL in order to increase worldwide adoption of the standard.
- Our vision is to be the free, open source platform that enables regulators, auditors and filers to build, validate and process structured data worldwide.



Using Arelle for ESRS

- Arelle currently supports validation of the draft ESRS XBRL taxonomy
 - Base specification only
 - ESRS specific validations (business rules, etc) will be added to Arelle and open sourced once they are made available.
- Arelle currently supports multi-instance and multi- target functionality
- The Arelle Viewer can display ESRS tagged documents



**Let's take a closer look at how Arelle
supports ESRS**

Multi-Instance / Target Processing Use Cases

- EDGAR Fee Exhibits, SBSEF (multi-instance, private/public)
 - Multi-instance situations (Fee Exhibit, SBSEF)
 - Redacted content or confidential treatment of some instances
- ESEF + ESG (possibly multi-target or multi-instance, all-public)
 - ESG may be comingled with financial data (where IFRS and ESG compatible)
 - ESG may be multi-targeted facts co-habiting financial filing
 - ESG may be independent instance document

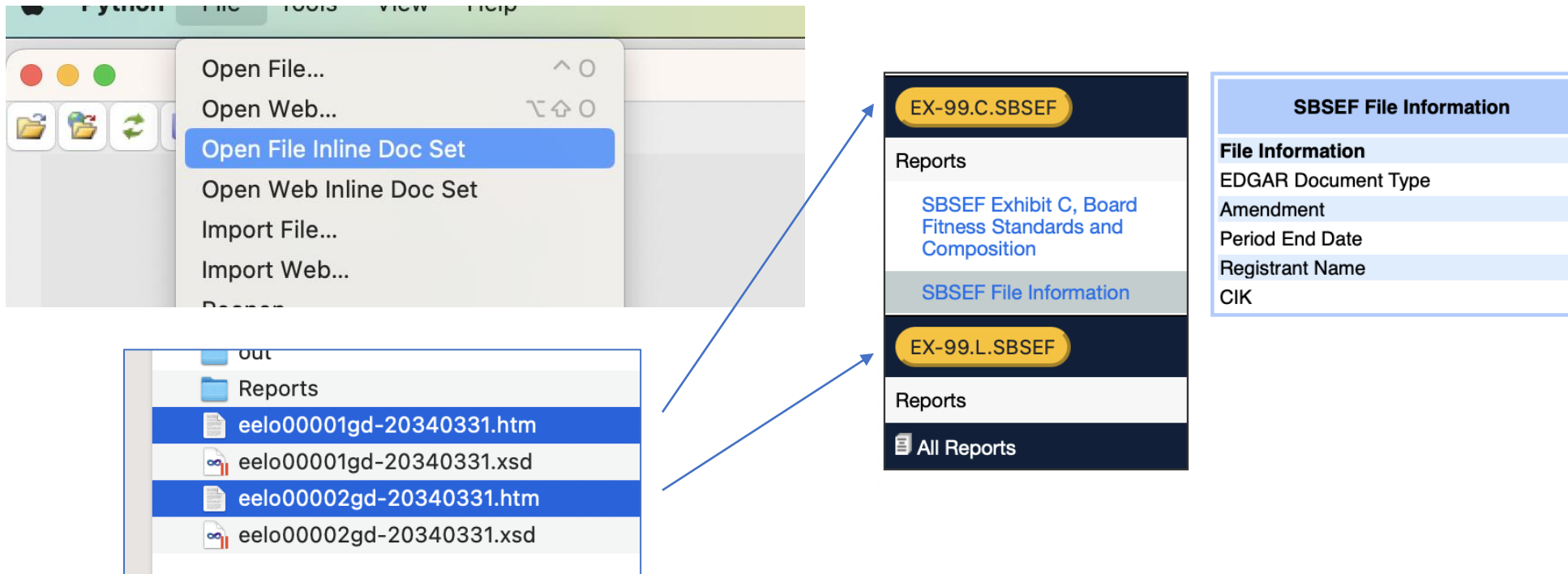
Scenarios of Operation

- Multi-instance situations:
 - EDGAR: inline IXDS or xBRL-XML, flat files (in SEC submission SGML wrapper)
 - SBSEF: primary non-XBRL + up to 15 supplemental exhibit IXBRL instances
 - Fee Exhibit: primary IXDS + fee exhibit IXBRL doc
 - SDR: primary xBRL-XML + supplemental xBRL-XML's
 - ESEF: report package of multiple inline report w/ multiple targets each
 - multiple IXDSes with multiple targets (IFRS + DK_GAAP or UK_SEF)
 - ESG: multiple IXDSes with IFRS + multiple ESG targets
- EDGAR:
 - receipt: java wrapper allocates doc files to IXDSes
 - GUI (for EDGAR filer): plugin allocates docs to IXDSes
- ESEF/ESG:
 - plugin would allocate report pkg report targets to IXDSes

Command Line (as EDGAR uses it)

- Bare bones, leaving out all EDGAR header parameters
 - SBSEF: `--plugin EdgarRenderer --disclosureSystem efm-pragmatic -f '[{"file": ".../sbsef03exc-20231231.htm", "attachmentDocumentType": "EX-99.D.SBSEF"}, {"file": ".../sbsef03exd-20231231.htm", "attachmentDocumentType": "EX-99.D.SBSEF"}, ...]' ...`
 - Fee exhibit: `--plugin EdgarRenderer --disclosureSystem efm-pragmatic -f '[{"ixds": [{"file": ".../F-1-two-instances/pri-doc.htm"}, {"file": ".../F-1-two-instances/pri-doc-part-2.htm"}], "submissionType": "F-1", "attachmentDocumentType": "F-1"}, {"file": ".../F-1-two-instances/EXFILINGFEES.htm", "submissionType": "F-1", "attachmentDocumentType": "EX-FILING FEES"}]' ...`

Graphical User Interface in Arelle



The screenshot illustrates the workflow in Arelle. On the left, a file menu is open with 'Open File Inline Doc Set' selected. Below it, a file explorer shows a 'Reports' folder containing four files: two HTML files and two XSD files. Arrows point from these files to a central report viewer. The report viewer displays two reports: 'EX-99.C.SBSEF' and 'EX-99.L.SBSEF'. The 'EX-99.C.SBSEF' report is expanded to show 'Reports' and 'SBSEF File Information'. The 'SBSEF File Information' section includes fields for 'EDGAR Document Type', 'Amendment', 'Period End Date', 'Registrant Name', and 'CIK'.

- Plugin sorts out files and associates them to IXDSes based on their content

Flat File Partitioning to IXDS

- For validate/EFM

```
supplementalAttachmentDocumentTypesPattern = re.compile(r"EX-FILING FEES.*|EX-99\[C-S]\.SBSEF.*")
```

```
def isolateSeparateIXDSes(modelXbrl, *args, **kwargs):
```

```
    separateIXDSes = defaultdict(list)
```

```
    for htmlElt in modelXbrl.ixdsHtmlElements:
```

```
        tp = "" # attachment document type inferred from document type and ffd:SubmissnTp
```

```
        for qn in ("dei:DocumentType", "ffd:FeeExhibitTp"):
```

```
            for elt in htmlElt.iterfind(f".//{{{htmlElt.modelDocument.ixNS}}}nonNumeric[@name='{qn}']"):
```

```
                tp = elt.stringValue.strip()
```

```
                if tp:
```

```
                    break
```

```
            separateIXDSes[tp if supplementalAttachmentDocumentTypesPattern.match(tp) else
        ""].append(htmlElt)
```

```
    return [htmlElts for tp,htmlElts in sorted(separateIXDSes.items(), key=lambda i:i[0])]
```

Private / Public Multi-instance Partitioning

Private Filing Data

Print Document

EX-99.C.SBSEF

Reports

SBSEF Exhibit C, Board Fitness Standards and Composition

SBSEF File Information

EX-99.D.SBSEF

Reports

EX-99.E.SBSEF

Reports

EX-99.F.SBSEF

Reports

EX-99.H.SBSEF

Reports

EX-99.I.SBSEF

Statements

Reports

EX-99.J.SBSEF

Statements

Reports

SBSEF Exhibit C, Board Fitness Standards and Composition 12 Months Ended Dec. 31, 2023

SBSEF Board Fitness Standards and Composition [Line Items]

SBSEF Board Fitness Standards and Composition [Text Block]

Exhibit C – Board of Directors

1. Introduction

XYZ, L.P. (“the “Facility”) is commenced by a five-person Board of Directors appointed by Partner, XYZ Holdings, LLC.

2. Selection of Directors

The Board of Directors is selected with the goal that the Facility achieves the highest success while fully complying with applicable laws and self-regulatory obligations.

A. Prospective Director Must Have Relevant Industry Expertise

In addition to possessing a strong reputation and capacity to exercise sound judgment, a prospective director must have sufficient relevant industry experience. Particularly initially, the Board requires directors with swaps trading facilities and swaps trading experience in order to effectively guide and support the operation of the regulated entity. In addition, relevant experience includes positions at another organization, such as a designated contract market, clearing organization, or in financial services clearing services. Also relevant is experience in compliance, legal, trading, position management, recordkeeping and reporting, and financial reporting, as well as experience in executive roles which would also be valuable as a result of

- Private and disseminated public instances rendered separately

Public Filing Data

Print Document

EX-99.C.SBSEF

Reports

SBSEF Exhibit C, Board Fitness Standards and Composition

SBSEF File Information

EX-99.L.SBSEF

Reports

All Reports

SBSEF File Information	12 Months Ended Dec. 31, 2023
File Information	
EDGAR Document Type	EX-99.C.SBSEF
Amendment	false
Period End Date	Dec. 31, 2023
Registrant Name	XYZ
CIK	0001314610

Pre-partitioned ISDSes (Known in Advance)

- Description at head of inlineXbrlDocumentSet.py plugin

If there are non-default target documents, the target document identifier can be specified by `ixdsTarget`

```
--file [{"ixds":[{"file":file1},{file":file2}...], "ixdsTarget":"xyz"}]
```

If the file source is a zip, `CmdLine` will discover the inline files in the zip as thus:

```
--file [{"ixds":[{"file":file1.zip}]}]
```

If the file source is a local directory, `CmdLine` will discover the inline files in the directory as thus:

```
--file [{"ixds":[{"file":dir1}]}]
```

```
arelleCmdLine --plugin inlineXbrlDocumentSet
```

```
  --file [{"ixds":[{"file": ".../PASS-multiple-input-multiple-output-ID1.html"},  
                {"file": ".../PASS-multiple-input-multiple-output-ID2.html"}],
```

```
        "ixdsTarget":"(default)"}]
```

```
  --saveInstance
```

Workflow with Pre-partitioned ISDSes

- Validate/EFM and EdgarRenderer set up Reports objects
- Edgar Renderer processes each Report (IXDS) in turn
- Edgar Renderer outputs FilingSummary.xml and MetaLinks.json for previously-mustard menu and SEC ixviewer

Workflow without Pre-partitioned ISDSes

- inlineXbrlDocumentSet.py calls plugin IsolateSeparateIXDSes
 - Returns dict of lists of ixHtmlElt trees by doc type
- IXDSes processed as Reports for validate/EFM and EdgarRenderer
 - Compiled into MetaLinks.json and MetaLinks.json by EdgarRenderer

Arelle is ready for ESRS!

- Please visit **arelle.org** for more information about Arelle, to learn how you can contribute to the project or to download the software for free.





Thank you for your attention!

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