Problems encountered when matching data items handled by trade practitioners with UN/CFEACT
Over the course of the year 2022, a Japanese government working group has been comparing invoice data items of trade practitioners and UN/CEFACT.
Mapping of practical data with UN/CEFACT (Japanese government project)

- The results of the cross-checking confirmed that many of the international trade items required for trade practitioners were **matched with UN/CEFACT.**

### Practical data
(Export Invoice, etc)

- **<Mismatch>**
  - IV : 65 items
  - PL : 20 items
  - Total : 85 items

- **<Match>**
  - IV : 60 items
  - PL : 70 items
  - Total : 130 items

- **Matched**

### UN/CEFACT
(Cross Industry Invoice, etc)

- **<Mismatch>**
  - IV : 140 items
  - PL + α : 330 items
  - Total : 470

- **<Mismatch>**
  - IV : 65 items
  - PL : 20 items
  - Total : 85 items

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Finding 1) UN/CEFACT needs more items

- When looking at the document units, some required items for trade practitioners are not defined on UN/CEFACT, and these items need to be **additionaly defined**.

<table>
<thead>
<tr>
<th>Practical data (Export Invoice, etc)</th>
<th>UN/CEFACT (Cross Industry Invoice, etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt;Mismatch&gt;</strong></td>
<td></td>
</tr>
<tr>
<td>IV: 65 items</td>
<td>IV: 140 items</td>
</tr>
<tr>
<td>PL: 20 items</td>
<td>PL+α: 330 items</td>
</tr>
<tr>
<td>Total: 85 items</td>
<td>Total: 470</td>
</tr>
<tr>
<td><strong>Data needed</strong></td>
<td></td>
</tr>
<tr>
<td><strong>&lt;Match&gt;</strong></td>
<td></td>
</tr>
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<tr>
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Finding 2) UN/CEFACT includes not international trade related items

- Looking at the mismatch items on the UN/CEFACT side, most of them were items that are **not required for international trade**, such as inland, accounting, and tax.

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**Not required for international trade** *(inland, accounting, tax, etc)*

- **<Match>**
- IV: 60 items
- PL: 70 items
- Total: 130 items
Finding 3) Blind spots in document unit management

- In some cases, items defined in UN/CEFACT did not match document-base because they were used in other documents in trade practice.

Practical data
(Export Invoice, etc)

UN/CEFACT
(Cross Industry Invoice, etc)

<table>
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<tr>
<th>Match</th>
<th>Partial Match</th>
<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV : 60 items</td>
<td>IV : 60 items</td>
<td>IV : 140 items</td>
</tr>
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- In some cases, items defined in UN/CEFACT did not match document-base because they were used in other documents in trade practice.
Finding 4) Blind spots in terms of data type, who, when, why

• In the process of data matching, we realized that "data type" and "Who, When, Why of data", which are necessary for practical use, were not taken into account in UN/CEFACT.

Practical data (Export Invoice, etc) vs. UN/CEFACT (Cross Industry Invoice, etc)

### Practical data specifies

- **Data type and**
  - IV: 65 items
  - PL: 20 items
  - Total: 85 items

- **"from Who to Who"**
  - "When" the data is used
  - "Why" the reason of trade

(*Trade compliance)

### UN/CEFACT does not

- **IV**: 140 items
- **PL**: 70 items
- **PL + α**: 330 items
- **Total**: 470 items

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3 Suggestion from our findings

- From these findings, we offer **three recommendations** for the future UN/CEFACT. These are consistent with the objectives of this project.

**Practical data** (Export Invoice, etc) **→** **UN/CEFACT** (Cross Industry Invoice, etc)

1. **UN/CEFACT issue of the lack of items that are practically necessary for international trade.**

2. There is a negative effect of managing data items by document (data is correct but documents are not).

3. UN/CEFACT lacks consideration of "data types" and "who, when, why of data".

1. **Add items to UN/CEFACT that are necessary for international trade practice; discussion needed on whether to keep inland items, etc.**

2. Since there is sway in which data is used for which documents by practitioners, it should be defined in terms of structured data necessary for trade.

   - Let’s define data elements of system rules
     - number of digits/characters
     - data types
     - validation rules
3 Suggestion from our findings

Future of Digital Trading

Structured data exchange

Country A
- Trading Company
- Logistics Company
- Bank
- Marine Insurance

Country B
- Trading Company
- Logistics Company
- Bank
- Marine Insurance

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### Result of Mapping of Invoice Data Elements

<table>
<thead>
<tr>
<th>Type of Documents</th>
<th>Mandatory Data Elements for Trading IV/PL</th>
<th>TW DB of Mandatory Data Elements for Trading IV/PL</th>
<th>UNCEFACT DB of Mandatory Data Elements for Trading IV/PL</th>
<th>UNCEFACT DB Of Mandatory Data Elements for Trading IV/PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export I/V</td>
<td>125</td>
<td>123</td>
<td>60</td>
<td>200</td>
</tr>
<tr>
<td>Export P/L</td>
<td>TBA</td>
<td>TBA</td>
<td>120</td>
<td>400</td>
</tr>
</tbody>
</table>

**POINT**

- Cross Industry Invoice doesn’t focus on ‘International Trading’.
  - including many subsets of Inland, Accounting, TAX