The handle of extensions

TODO: discussion, how could we store the additional infor in extensions. and integrate between TS and ProformaService

1, additional information, currently solution is place in the additionalDocumentReference for document level or DocumentReference for line level.

the information please check in the wiki All in one -- Invoice

2, store in extensions - efapiao: invoice

related project:

https://github.com/BaiwangTradeshift/bwts-cninvoice-dto https://github.com/BaiwangTradeshift/bwts-cninvoice-xsd

3, store the additional information in extensions - selfbilledinvoice

the example from Gert:

```
<!--
Corrected version:
UBLExtensions has to come first
We need ID and IssueDate before the InvoicePeriod
AccountingCustomerParty comes before AccountingSupplierParty
We need LegalMonetaryTotal
Price comes after Item on the line
<?xml version="1.0" encoding="UTF-8"?>
<SelfBilledInvoice
xmlns="urn:oasis:names:specification:ubl:schema:xsd:SelfBilledInvoice-2"
xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateC
omponents-2"
xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicCompo
xmlns:ext="urn:oasis:names:specification:ubl:schema:xsd:CommonExtensionC
omponents-2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:oasis:names:specification:ubl:schema:xsd:SelfBil
ledInvoice-2 UBL-SelfBilledInvoice-2.0.xsd">
<!--
********************
<ext:UBLExtensions>
     <ext:UBLExtension>
<ext:ExtensionURI>http://tradeshift.com/api/public/1.0/consumptionInform
ation</ext:ExtensionURI>
        <ext:ExtensionContent>
```

```
<ts:QuantityBalanceLine
xmlns:ts="http://tradeshift.com/api/public/1.0">
                  <ts:SelfBilledInvoiceLineReference>
                       <cbc:LineID>1</cbc:LineID>
                  </ts:SelfBilledInvoiceLineReference>
<ts:InvoicedQuantityNegativeIndicator>false</ts:InvoicedQuantityNegative</pre>
Indicator> <!-- if the invoiced quantity at the line level is negative,
set this to 'true' -->
<ts:CurrentPeriodQuantityBalance>100</ts:CurrentPeriodQuantityBalance>
<!-- GuaZhang 'ThisMonthBalance' -->
<ts:PreviousPeriodQuantityBalance>114</ts:PreviousPeriodQuantityBalance>
<!-- GuaZhang 'LastMonthBalance' -->
                  <cbc:ReceivedQuantity</pre>
unitCode="KG">90</cbc:ReceivedQuantity> <!-- GuaZhang
'ThisMonthPurchase' -->
                  <cbc:OversupplyQuantity>1.0</cbc:OversupplyQuantity>
<!-- GuaZhang 'ThisMonthReturnsQualifiedProduct' -->
                  <cbc:RejectedQuantity>3</cbc:RejectedQuantity> <!--</pre>
GuaZhang 'ThisMonthReturnNOT-QualifiedProduct' -->
              </ts:QuantityBalanceLine>
              <ts:QuantityBalanceLine
xmlns:ts="http://tradeshift.com/api/public/1.0">
                  <ts:SelfBilledInvoiceLineReference>
                       <cbc:LineID>2</cbc:LineID>
                  </ts:SelfBilledInvoiceLineReference>
<ts:InvoicedQuantityNegativeIndicator>false</ts:InvoicedQuantityNegative</pre>
Indicator> <!-- if the invoiced quantity at the line level is negative,
set this to 'true' -->
<ts:CurrentPeriodQuantityBalance>200</ts:CurrentPeriodQuantityBalance>
<!-- GuaZhang 'ThisMonthBalance' -->
<ts:PreviousPeriodQuantityBalance>214</ts:PreviousPeriodQuantityBalance>
<!-- GuaZhang 'LastMonthBalance' -->
                  <cbc:ReceivedQuantity</pre>
unitCode="KG">90</cbc:ReceivedQuantity> <!-- GuaZhang
'ThisMonthPurchase' -->
                  <cbc:OversupplyQuantity>1.0</cbc:OversupplyQuantity>
<!-- GuaZhang 'ThisMonthReturnsQualifiedProduct' -->
                  <cbc:RejectedQuantity>3</cbc:RejectedQuantity> <!--</pre>
GuaZhang 'ThisMonthReturnNOT-QualifiedProduct' -->
              </ts:QuantityBalanceLine>
```

```
</ext:ExtensionContent>
      </ext:UBLExtension>
      <ext:UBLExtension>
<ext:ExtensionURI>http://tradeshift.com/api/public/1.0/feeInformation/e
xt:ExtensionURI>
          <ext:ExtensionContent>
              <ts:PenaltyAdjustment
xmlns:ts="http://tradeshift.com/api/public/1.0">
                  <ts:PenaltyAdjustmentLine>
                      <ts:SelfBilledInvoiceLineReference>
                          <cbc:LineID>3</cbc:LineID>
                      </ts:SelfBilledInvoiceLineReference>
<ts:PriceReductionPercent>3.5</ts:PriceReductionPercent>
<ts:PenaltyReasonIdentifier></ts:PenaltyReasonIdentifier>
<ts:PenaltyRuleIdentifier></ts:PenaltyRuleIdentifier>
                      <ts:PenaltyRule></ts:PenaltyRule>
<ts:InvoicedPenalityNegativeIndicator>true</ts:InvoicedPenalityNegativeI</pre>
ndicator> <!-- if the invoiced penalty at the line level is negative,
set this to 'true' -->
                  </ts:PenaltyAdjustmentLine>
                  <ts:PenaltyAdjustmentLine>
                      <ts:SelfBilledInvoiceLineReference>
                          <cbc:LineID>4</cbc:LineID>
                      </ts:SelfBilledInvoiceLineReference>
<ts:PriceReductionPercent>0.0</ts:PriceReductionPercent>
<ts:PenaltyReasonIdentifier></ts:PenaltyReasonIdentifier>
                      <ts:PenaltyReason></ts:PenaltyReason>
<ts:PenaltyRuleIdentifier></ts:PenaltyRuleIdentifier>
                      <ts:PenaltyRule></ts:PenaltyRule>
<ts:PenaltyQuantityTimes>20</ts:PenaltyQuantityTimes>
<ts:InvoicedPenalityNegativeIndicator>true</ts:InvoicedPenalityNegativeI</pre>
ndicator> <!-- if the invoiced penalty at the line level is negative,
set this to 'true' -->
                  </ts:PenaltyAdjustmentLine>
                  <ts:PenaltyAdjustmentLine>
                      <ts:SelfBilledInvoiceLineReference>
                          <cbc:LineID>5</cbc:LineID>
                      </ts:SelfBilledInvoiceLineReference>
```

```
<ts:PenaltyReasonIdentifier></ts:PenaltyReasonIdentifier>
                      <ts:PenaltyReason>201612</ts:PenaltyReason>
<ts:PenaltyRuleIdentifier></ts:PenaltyRuleIdentifier>
                      <ts:PenaltyRule></ts:PenaltyRule>
<ts:InvoicedPenalityNegativeIndicator>false</ts:InvoicedPenalityNegative</pre>
Indicator> <!-- if the invoiced penalty at the line level is negative,
set this to 'true' -->
                  </ts:PenaltyAdjustmentLine>
              </ts:PenaltyAdjustment>
          </ext:ExtensionContent>
      </ext:UBLExtension>
  </ext:UBLExtensions>
  <cbc:UBLVersionID>2.0</cbc:UBLVersionID>
<cbc:CustomizationID>urn:tradeshift.com:ubl-2.0-customizations:2010-06
cbc:CustomizationID>
  <cbc:ProfileID</pre>
schemeAgencyID="http://tradeshift.com">urn:tradeshift.com:profile:BasicS
elfBilledProformaInvoice:ver1.0</cbc:ProfileID>
  <cbc:ID>GZ01</cbc:ID>
  <cbc:IssueDate>2017-03-28</cbc:IssueDate>
  <!-- InvoicePeriod is a standard UBL element. Other buyers may need to
be precise about the exact period, or it might not align with a month -
  so specifying start and end date is preferred -->
  <cac:InvoicePeriod>
      <cbc:StartDate>2016-12-01</cbc:StartDate>
      <cbc:EndDate>2016-12-31
  </cac:InvoicePeriod>
  <cac:AccountingCustomerParty>
      <cac:Party>
          <cac:PartyIdentification>
              <cbc:ID schemeID="CN:VAT">120103761102041</cbc:ID>
          </cac:PartyIdentification>
      </cac:Party>
  </cac:AccountingCustomerParty>
  <!-- This is sender -->
  <cac:AccountingSupplierParty>
      <cac:Party>
          <cac:PartyIdentification>
              <cbc:ID schemeID="CN:VAT">310104781108048</cbc:ID>
          </cac:PartyIdentification>
```

```
</cac:AccountingSupplierParty>
  <cac:LegalMonetaryTotal> <!-- If there are only lines with</pre>
FreeOfChargeIndicator element with value "true" the elements in the
LegalMonetaryTotal class should also have the values set to "0.00". Note
the LegalMonetaryTotal cannot be negative -->
      <!-- <cbc:LineExtensionAmount
currencyID="CNY">500.00</cbc:LineExtensionAmount> -->
      <!-- <cbc:TaxExclusiveAmount
currencyID="CNY">0.00</cbc:TaxExclusiveAmount> -->
      <!-- <cbc:TaxInclusiveAmount
currencyID="CNY">500.00</cbc:TaxInclusiveAmount> -->
      <cbc:PayableAmount currencyID="CNY">420.00</cbc:PayableAmount>
  </cac:LegalMonetaryTotal>
  <cac:InvoiceLine>
      <cbc:ID>1</cbc:ID> <!-- The ID should be always provided because</pre>
of xsd validation and also businesswise in order to collerate the
extension quantities with the Invoiceline -->
      <cbc:Note>A note from the buyer</cbc:Note> <!-- GuaZhang</pre>
'buyerNote' -->
      <cbc:InvoicedQuantity unitCode="EA">10</cbc:InvoicedQuantity>
<!-- TSUBL quantities should never be negative - use
SelfBilledCreditNote instead for the negatives -->
      <!-- LineExtensionAmount is the total, pre-tax. Based on the
'Price' element -->
      <cbc:LineExtensionAmount</pre>
currencyID="CNY">0</cbc:LineExtensionAmount>
      <cbc:FreeOfChargeIndicator>true</cbc:FreeOfChargeIndicator> <!--</pre>
Indicates GuaZhang 'priceless' if true. -->
      <cac:Item>
          <cbc:Name>BQF3.0<!-- GuaZhang 'componentName' -->
          <cac:BuyersItemIdentification> <!-- GuaZhang 'componentCode'</pre>
(Buyer's ID) -->
              <cbc:ID>6578489</cbc:ID>
          </cac:BuyersItemIdentification>
          <cac:SellersItemIdentification> <!-- GuaZhang 'componentCode'</pre>
(Suppliers's ID - not sure if we need it - but some of the samples had
it) -->
              <cbc:ID>AY2345</cbc:ID>
          </cac:SellersItemIdentification>
      </cac:Item>
  </cac:InvoiceLine>
  <cac:InvoiceLine>
```

</cac:Party>

```
<cbc:ID>2</cbc:ID>
      <cbc:Note>Another note from the buyer</cbc:Note>
      <cbc:InvoicedQuantity unitCode="EA">20</cbc:InvoicedQuantity>
      <cbc:LineExtensionAmount</pre>
currencyID="CNY">500.00</cbc:LineExtensionAmount>
      <cbc:FreeOfChargeIndicator>false</cbc:FreeOfChargeIndicator><!--</pre>
Indicates GuaZhang 'priceless' if true. For 'negative' and 'positive',
we just look at the sign in 'InvoicedQuantity' elementthe quantity is
always positive but you need to check the
'InvoicedQuantityNegativeIndicator' element in the extension -->
      <cac:Item>
          <cbc:Name>BQF3.0</cbc:Name>
          <cac:BuyersItemIdentification>
              <cbc:ID>3874593</cbc:ID>
          </cac:BuyersItemIdentification>
          <cac:SellersItemIdentification>
              <cbc:ID>AY3774</cbc:ID>
          </cac:SellersItemIdentification>
      </cac:Item>
      <cac:Price>
          <cbc:PriceAmount currencyID="CNY">250</cbc:PriceAmount> <!--</pre>
GuaZhang 'amount'. This is price per 'BaseQuantity' -->
          <cbc:BaseQuantity unitCode="EA">10</cbc:BaseQuantity>
          <cbc:OrderableUnitFactorRate>0.1/cbc:OrderableUnitFactorRate>
      </cac:Price>
  </cac:InvoiceLine>
  <cac:InvoiceLine>
      <cbc:ID>3</cbc:ID>
      <cbc:Note>A note from the buyer</cbc:Note>
      <cbc:InvoicedQuantity unitCode="EA">20</cbc:InvoicedQuantity>
      <cbc:LineExtensionAmount</pre>
currencyID="CNY">70</cbc:LineExtensionAmount>
      <cac:Item>
          <cbc:Name>BQF4.0</cbc:Name>
      </cac:Item>
      <cac:Price>
          <cbc:PriceAmount currencyID="CNY">100</cbc:PriceAmount> <!--</pre>
GuaZhang 'amount'. This is price per 'BaseQuantity' -->
      </cac:Price>
  </cac:InvoiceLine>
  <cac:InvoiceLine>
      <cbc:ID>4</cbc:ID>
      <cbc:Note>A note from the buyer</cbc:Note>
      <cbc:InvoicedQuantity unitCode="EA">1</cbc:InvoicedQuantity>
```

```
<cbc:LineExtensionAmount</pre>
currencyID="CNY">60</cbc:LineExtensionAmount>
      <cac:Item>
          <cbc:Name>BQF5.0</cbc:Name>
      </cac:Item>
      <cac:Price>
          <cbc:PriceAmount currencyID="CNY">3</cbc:PriceAmount> <!--</pre>
GuaZhang 'amount'. This is price per 'BaseQuantity' -->
      </cac:Price>
  </cac:InvoiceLine>
  <cac:InvoiceLine>
      <cbc:ID>5</cbc:ID>
      <cbc:Note>A note from the buyer</cbc:Note>
      <cbc:LineExtensionAmount</pre>
currencyID="CNY">50</cbc:LineExtensionAmount>
      <cac:Item>
          <cbc:Name>201712</cbc:Name>
      </cac:Item>
```

</cac:InvoiceLine>

</SelfBilledInvoice>