The Aim of this Poster Presentation

To Offer Possible Solutions for Markup of UNITS based not on the Metric System

⇒ Especially Focusing on @quantity attribute of <measure> element
⇒ In order to make use of Transactionography [Tomasek & Bauman, 2013]

To Discuss Unit Conversion and Invite Feedback from other Region’s Markup Examples than Japan

Target | Engi-shiki, Admin. Manual in 10c. Japan

In the Engi-shiki, there are variety of documents on governance: Distribution of Taxes and Offerings to the Govt., Necessities for Festivals and Rituals, etc.

⇒ Through Tracing the Movements of Objects from where/whom to where/whom, we can grasp some of the Social Aspects of that time.
⇒ At first, it is necessary to encode OBJECTS which were measured in weight or length.

銅二千五百十六斤十両二分四銖
Copper 2516Kin 10Ryo 2Bu 4Shu (in weight)
cf. 1Kin = 16Ryo, 1Ryo = 4Bu, 1Bu = 6Shu

Problem | Original or Internationalized Value?

How can we Mark-up this?
⇒ Current Scheme only permits numerical values based on the Metric System like that:

<measure commodity="銅" quantity="2516.666666" unit="両"/>

However, It Should be Important to Keep the Original Values in Certain Cases
⇒ In this Engi-shiki, such multiple units itself are the testimony that the value was regulated in the earlier period before the Engi-shiki was out.
⇒ Such values are equal to ONE-THIRD of the certain values. (cf. Exactly 7550Kin)

Possible Solutions

<Unit> & Nested <extent> Elements

<extent>
<measure commodity="銅" unit畚></measure>
<num value="2516">二千五百十六</num>
<unit type="weight">斤</unit>
<num value="10">十</num>
<unit type="weight">兩</unit>
<num value="2">二</num>
<unit type="weight">分</unit>
<num value="4">四</num>
</extent>

Cf. About <unit> element, see below:
‘Add new element <unit> #1461’,
https://github.com/TEIC/TEI/issues/1461

<extent> & <measure> Elements

<extent>
<measure commodity="銅" unit畚></measure>
<measure type="weight" quantity="2516" unit="両">二千五百十六</measure>
<measure type="weight" quantity="10" unit="兩">十</measure>
<measure type="weight" quantity="2" unit="分">二</measure>
<measure type="weight" quantity="4" unit="銖">四</measure>
</extent>

@n Attributes in one <measure> Element

<measure commodity="銅" n="2516/10/2/4" unit="両/両/分/銖">銅二千五百十六斤十両二分四銖</measure>