

XML4IP JPO proposals
~ the country-specific extension method ~


Japan Patent Office
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Agenda

- Introduction
- A country specific-extension method
- Samples
- Summary

Introduction

- We suppose that the definitions and conditions are ill-defined in which decide elements and components as XML4IP still now.
- There are some demerits in the case of choosing the pattern of complete coverage of all elements as XML4IP.
 - It is of limited use as the schema for validation.
 - The maintenance work in the future becomes unreal.

 JPO thinks that XML4IP should be able to define the method of the country-specific extension definitely.

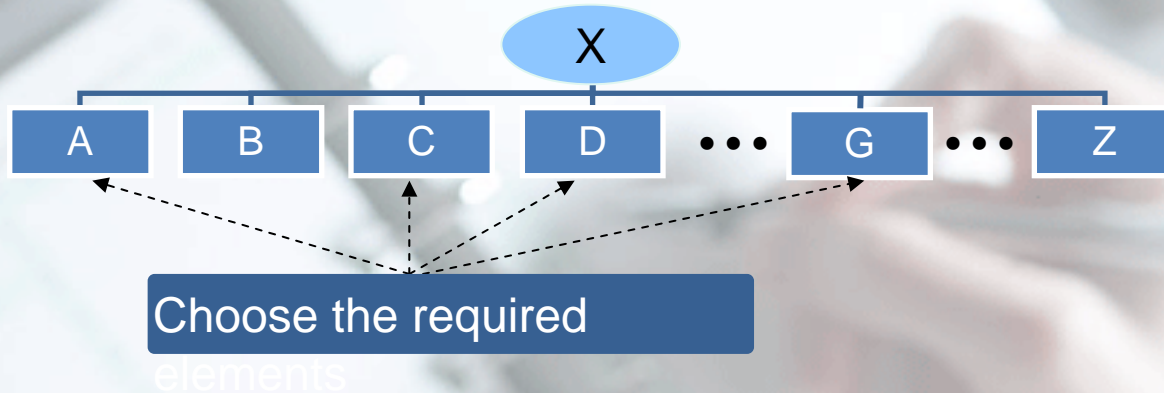
Introduction

Easy implementation to each domestic system.

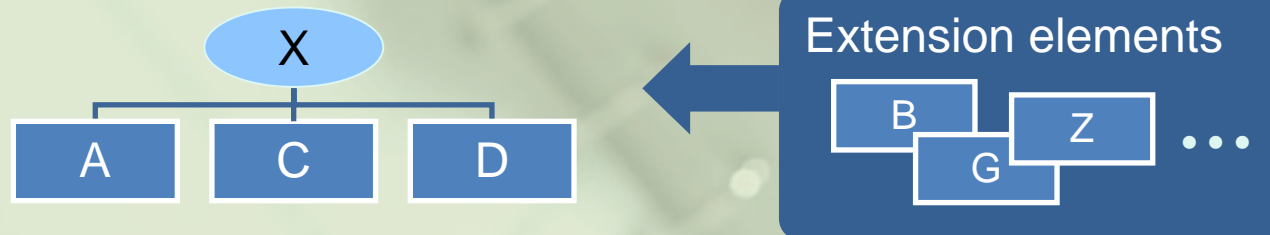
- Each country can carry out validation check of the instance filling the requirements for its own country using XML schema when the XML4IP is extended as the base.
- Easy to use and maintain XML4IP for each country using it.
- Availability of XML tools and program with XML4IP.

The pattern of Methods of arranging items of all countries

(1) Complete coverage of all elements



(2) The standard which allows for countries' extension

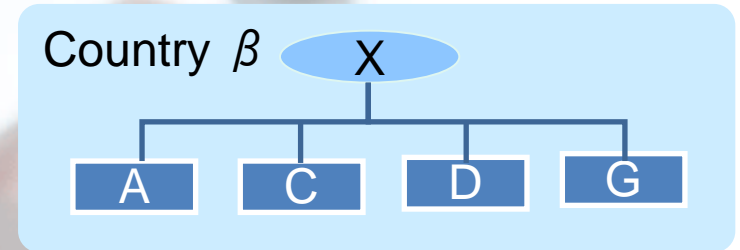
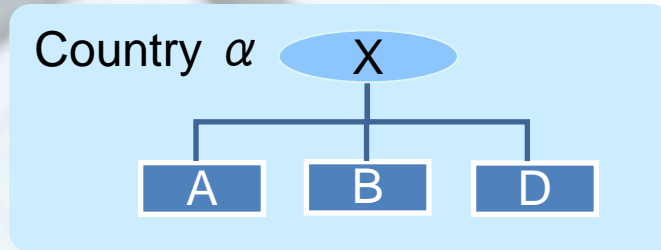


(3) Strict standardization

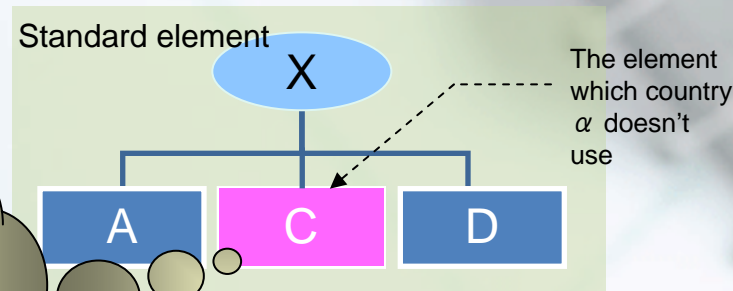


Introduction of the country-specific extension method

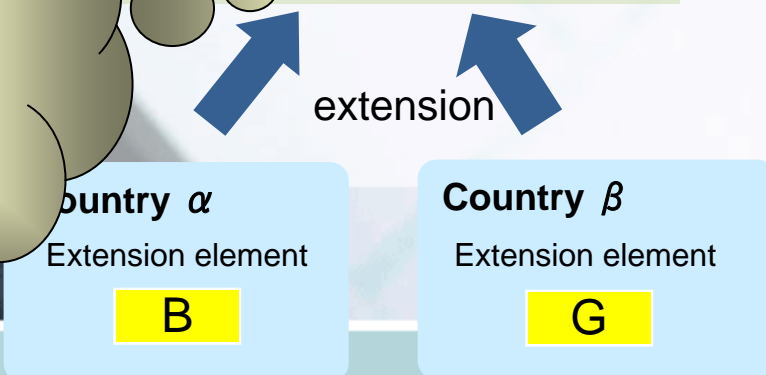
Element structures which is different from each other



(2) The standard which allows for countries' extension



Country α 's Schema can not prohibit the occurrence of element C even though it should not be used.



(4) The country-specific extension method

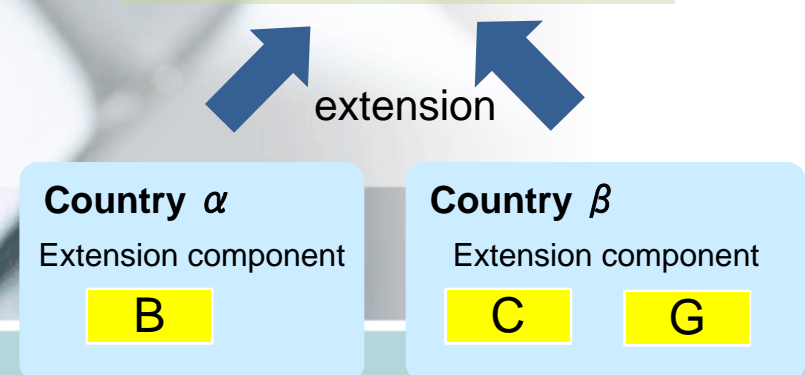
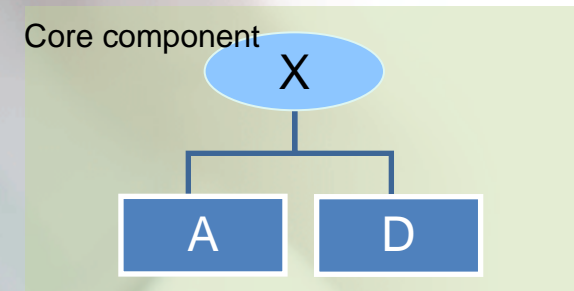
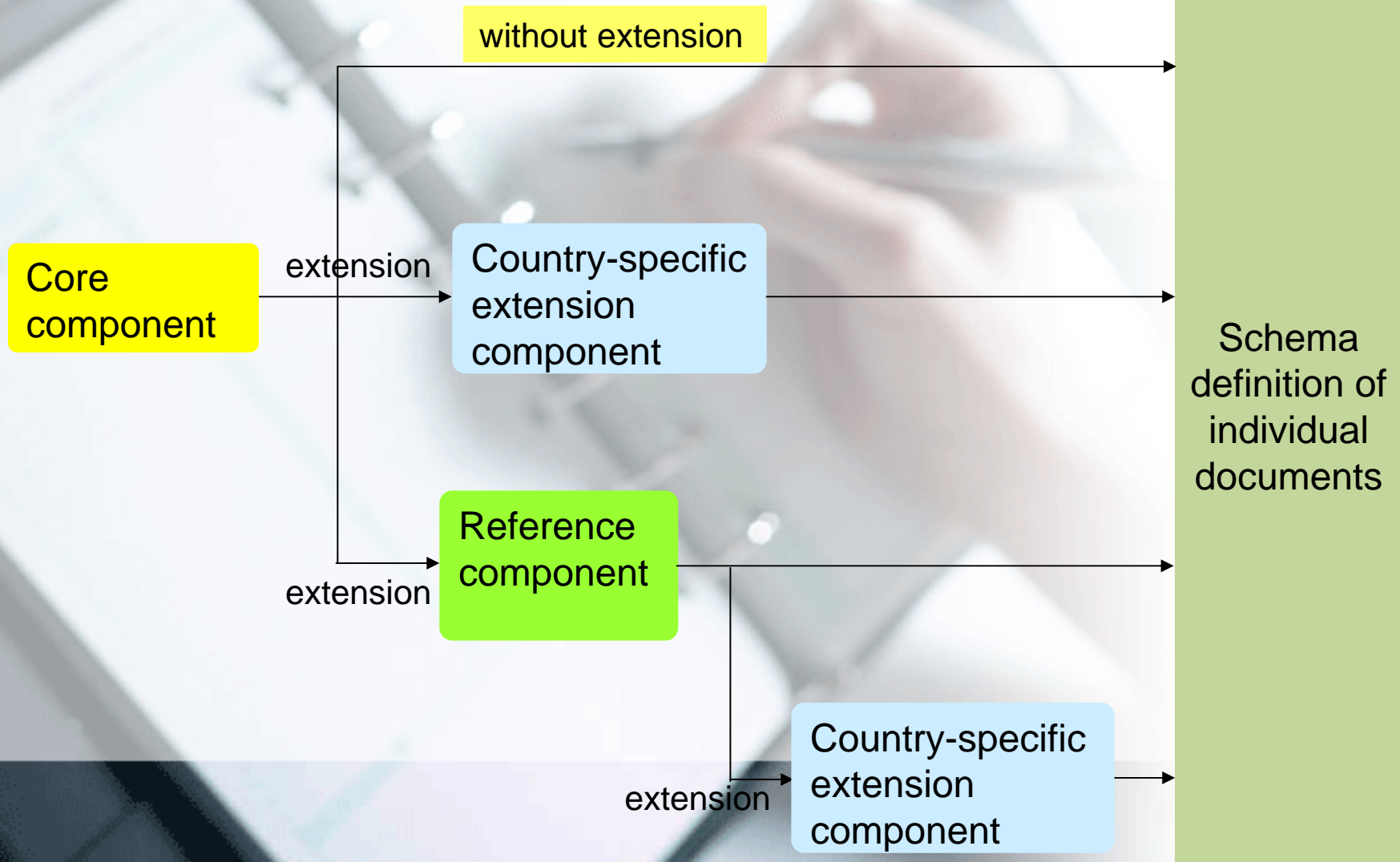


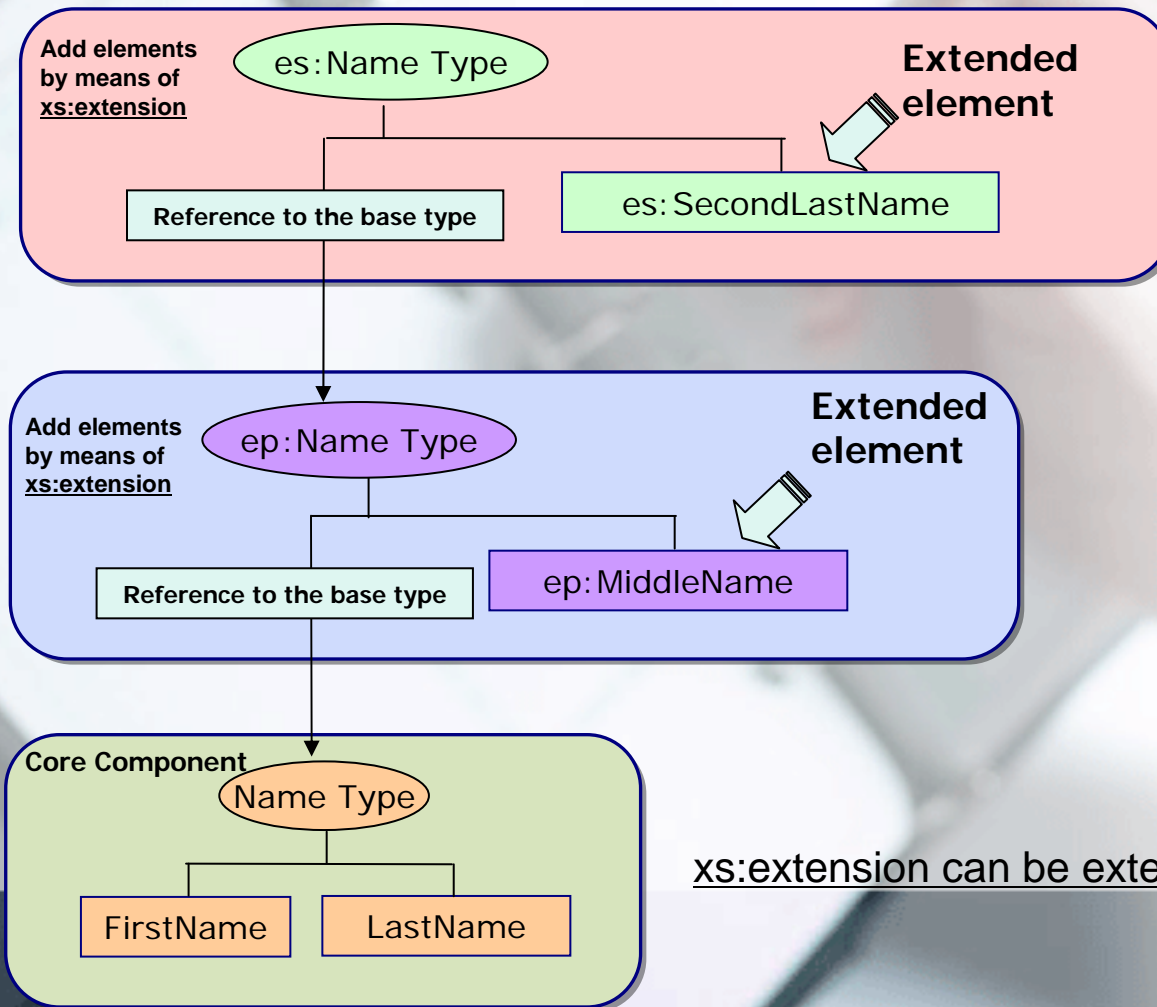
Table 2. Comparison with a general item arrangement methods and the country-specific extension method

Evaluation criteria	(1) Complete coverage of all elements	(2) The standard which allows for countries extension	(3) Strict standardization	(4) Country-specific extension method
The usability for a domestic documents processing	C	B	B	A
The ease of using at data exchange to a foreign country	C	C	A	C
Prospect and maintenance cost	C	B	C	A
Difficulty of opinion concentration	B	C	C	A
Comprehensive evaluation	C	B	B	A

Reference Components

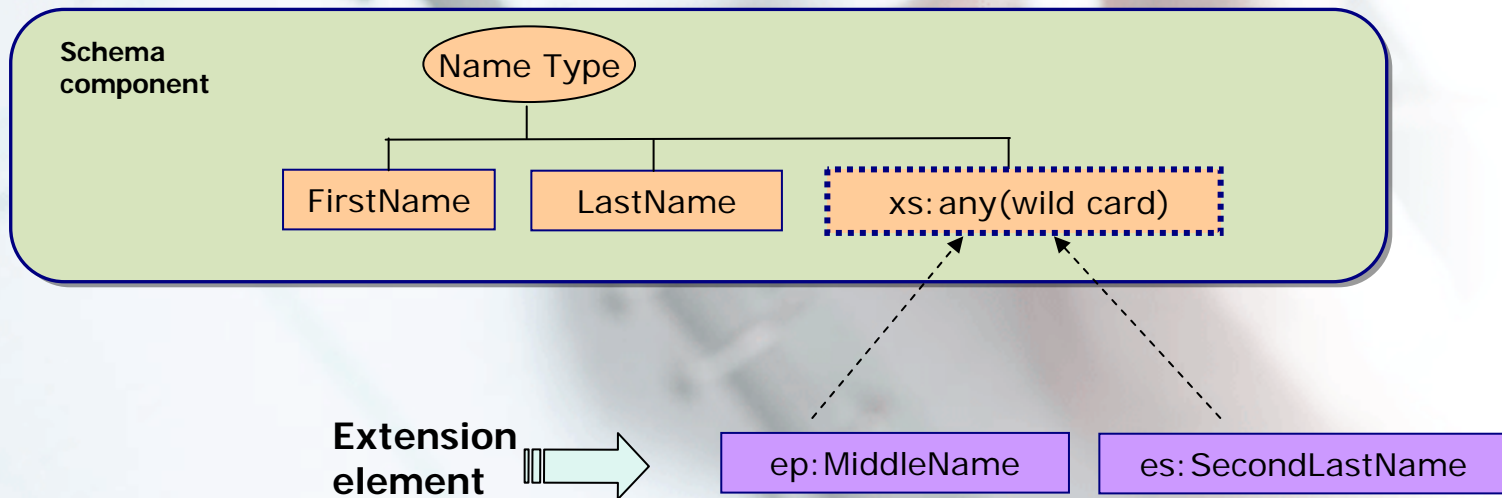


Schema components which enabled it to describe unspecified element using xs:any

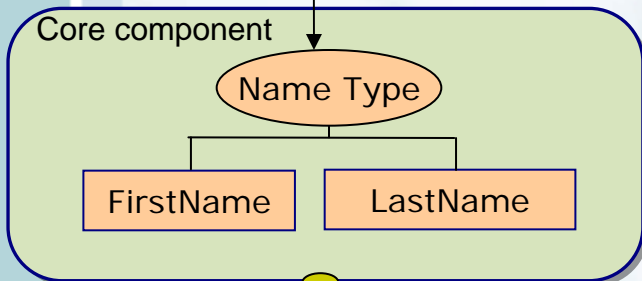
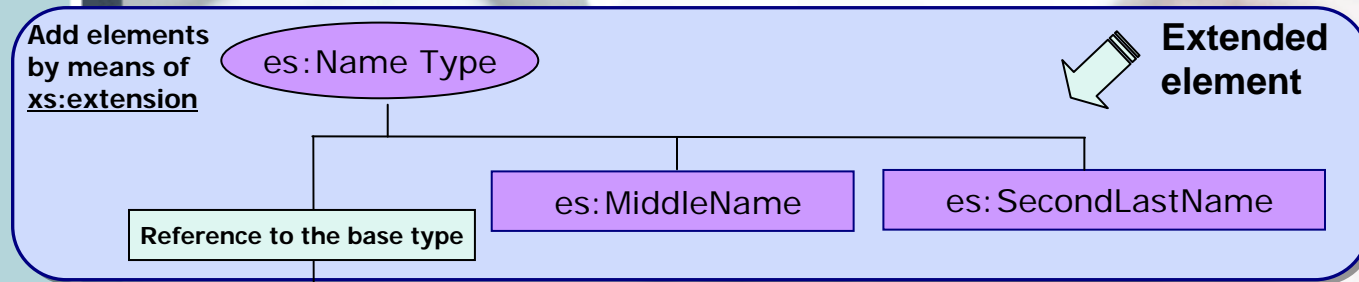


xs:extension can be extend hierarchically-specified

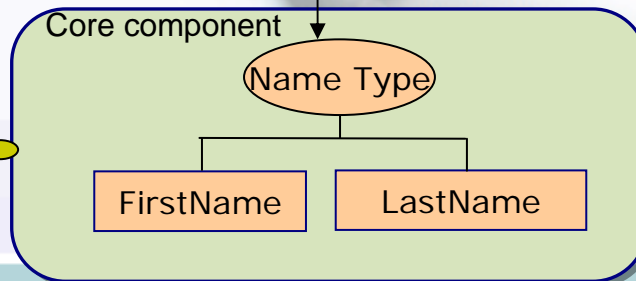
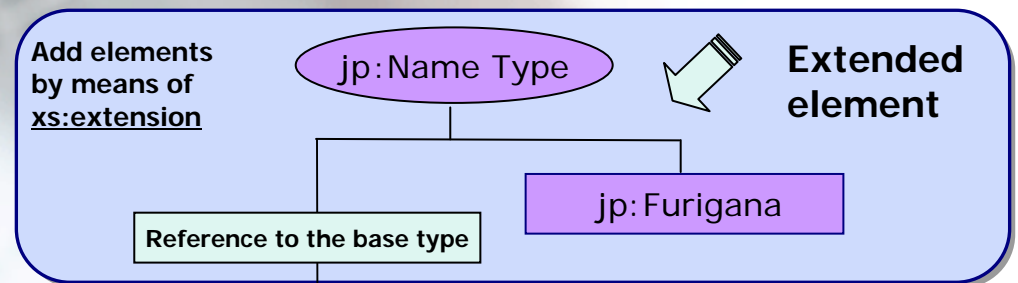
Method of making a schema components using the way of wild card



Examples of using extension type (xs:extension function)



Two core components are consist of exactly same elements.



Replace the element defined by the fundamental framework using substitutionGroup

The Basic Framing Structure using XML4IP schema components

(Available without extension)

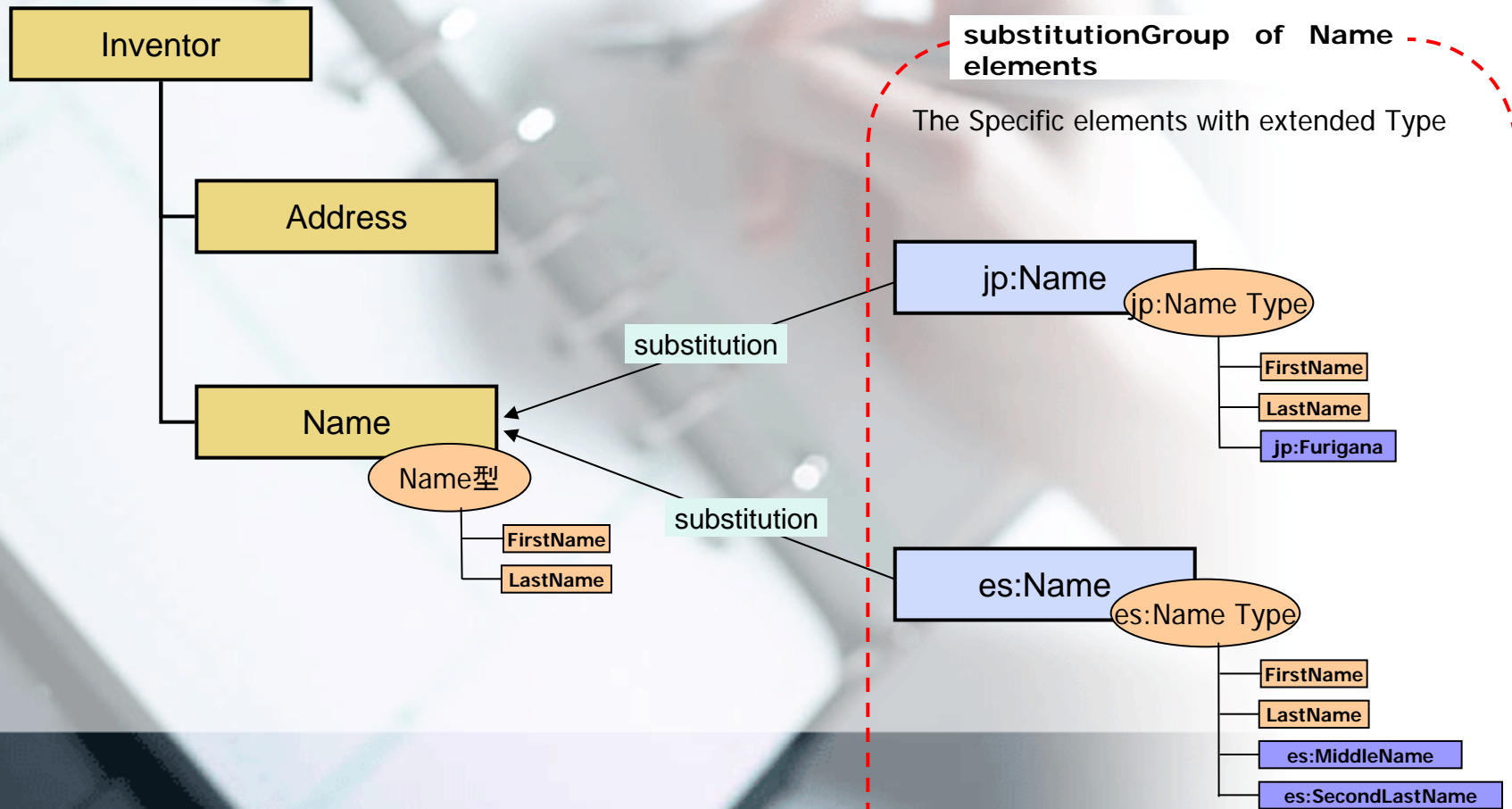


Table 3. Comparison of realization of the country-specific extension method

Item	xs:any	xs:extension
Complete data validation by XML Schema	No	Yes
Authoring support by a general-purpose tool	No	Yes
Distinction of the country-specific extension elements and other additional elements	No	Yes
The country-specific extension which does not define a schema	Yes	No
Skip over the unknown country-specific extension element	Yes	No
Validation of the unknown country-specific extension element	No	No

Summary

- Even ST.36, ST.66, and ST.86 have the capability of extension, but they can't be applied to build as a schema as the validation use.
- If the country-specific extension method that JPO proposes is adopted, the each country system can validate the whole item in the documents by using the extended structural schema
- Because a hierarchical extension is possible, an each country-specific components not only are extended but also it is possible to extend it of the regional extension.