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Sponsored by the Learning Technology Standards Committee
of the IEEE Computer Society

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This note will be removed upon reaching the final draft of this IEEE document.]

Introduction

(This introduction is not part of IEEE P1484.2.21, Public and Private Information (PAPI) for Learners — Learner Contact Information.)

** TO BE SUPPLIED **

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1 Overview

Abstract

The Public and Private Information (PAPI) for Learners (PAPI Learner) Standard describes "portable" learner records. The PAPI Learner Standard is a data interchange specification, i.e., it is used for communication among cooperating systems ("cooperation" may be achieved by conformance to the PAPI Learner Standard and, possibly, other specifications). The data is exchanged: (1) via external specification, i.e., only PAPI Learner coding bindings are used while some other data communication method is mutually agreed upon by data exchange participants, (2) via control transfer mechanism to facilitate data interchange, e.g., PAPI Learner API bindings, or (3) via data and control transfer mechanisms, e.g., PAPI Learner protocol bindings.

An important feature of the PAPI Learner Standard is the logical division, separate security, and separate administration of several types of learner information. These types of information are also known as "profile information" and "learner profiles". The PAPI Learner Standard may be integrated with other systems, protocols, formats, and technologies. The PAPI Learner Standard is organized as the following Parts:

- IEEE 1484.2.1, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Core Features*": The main data model and references to other standards.
- IEEE 1484.2.2, "*Guide for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Rationale*": An explanation of important decisions during the development of this Standard.
- IEEE 1484.2.3, "*Guide for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Information Security Issues*": Information and recommendations on important security issues for implementations.
- IEEE 1484.2.4, "*Guide for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Examples and Illustrations*": Information for implementers.
- IEEE 1484.2.5, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Registration Authority Process*": How data elements, value space, coding schemes, code sets, etc. are registered.
- IEEE 1484.2.6, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Data Element Registry*": The registry of data elements, value space, coding schemes, code sets, etc..
- IEEE 1484.2.21, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Contact Information*", e.g., name, postal address, telephone number, etc..
- IEEE 1484.2.22, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Relations Information*", e.g., classmates, teammates, mentors, etc..
- IEEE 1484.2.23, "*Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Security Information*", e.g., public keys, private keys, credentials, etc..

- IEEE 1484.2.24, *"Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Preference Information"*, e.g., as useful and unusable I/O devices, learning styles, physical limitations, etc..
- IEEE 1484.2.25, *"Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Performance Information"*, e.g., grades, interim reports, log books, etc..
- IEEE 1484.2.26, *"Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Learner Portfolio Information"*, e.g., accomplishments and works, etc..

NOTE — The phrase "this Part" or "this Part of this Standard" self-refers to an individual part of the PAPI Learner Standard. The phrase "this Standard" or "the PAPI Learner Standard" refers to the whole collection of parts.

1.1 Scope

The PAPI Learner Standard is a multi-part standard that specifies the semantics and syntax of learner information. Learner information is information associated learners and used by learning technology systems. Learner information may be created, stored, retrieved, used, etc., by learning technology systems, individuals (e.g., teachers, learners, etc.), and other entities.

The PAPI Learner Standard defines and/or references elements for recording descriptive information about: knowledge acquisition, skills, abilities, personal contact information, learner relationships, security parameters, learner preferences and styles, learner performance, learner-created portfolios, and similar types of information. This Standard permits different views of the learner information (perspectives: learner, teacher, parent, school, employer, etc.) and substantially addresses issues of privacy and security.

This Part only specifies learner contact information. This provisions in this Part are dependent upon the provisions of Part 1, Core Features, and may be dependent upon provisions of Part 6, Data Element Registry.

1.2 Purpose

The purpose of this Part is to provide small modules of learner information, such as contact information. Users of the PAPI Learner Standard may choose the parts that are appropriate for their application.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- IEEE P1484.2.1/D8, Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Core Features

- IEEE P1484.2.6/D8, Standard for Learning Technology — Public and Private Information (PAPI) for Learners (PAPI Learner) — Data Element Registry
- IEEE P1484.3/D3, Standard for Learning Technology — Glossary
- IETF RFC 822, Format of E-mail Messages and E-mail addresses
- IETF RFC 2421, Voice Profile for Internet Mail - version 2
- ISO/IEC 2382, Information Technology — Vocabulary (multiple parts)
- ISO/IEC 11180, Postal Addressing
- ISO/IEC 11404, Information Technology — Programming languages, their environments and system software interfaces — Language-independent datatypes
- ISO/IEC TR 14652, Information Technology — Specification method for cultural conventions
- ITU-T E.164 (1997), ITU-T Recommendation E.164, The international public telecommunication numbering plan
- W3C XML, Extensible Markup Language (XML)
<http://www.w3.org/TR/REC-xml>

3 Definitions

3.1 Definitions incorporated via normative reference

The following terms and their definitions have been incorporated via the normative references in the following order (lowest precedence to highest precedence):

- ISO/IEC 2382, Information Technology — Vocabulary (multiple parts)
- ISO/IEC 11179, Information Technology — Data Management and Interchange — Metadata Registries (MDR), Part 1: Framework
- IEEE 1484.3, Glossary
- IEEE 1484.2.1, PAPI Learner — Core Features

3.2 Acronyms and abbreviations

- IETF: Internet Engineering Task Force
- PBX: Private Branch Exchange
- RFC: Request for Comments; a citation prefix for specifications developed by the Internet Engineering Task Force
- SPM: smallest permitted maximum

4 Conformance

IEEE 1484.2.1, Clause 4, Conformance, is incorporated by reference.

IEEE 1484.2.1, Annexes C-F, the conditionally normative annexes, are incorporated by reference.

5 Data model

IEEE 1484.2.1, Clause 5, Functionality, is incorporated by reference.

IEEE 1484.2.1, Clause 6, Conceptual Model, is incorporated by reference.

IEEE 1484.2.1, Clause 7, Semantics, is incorporated by reference.

This Clause defines datatypes that are used by the PAPI Learner contact information type. Embedded ISO/IEC 11404 comments apply to the ISO/IEC 11404 definition, for example:

- "all components optional" means that the obligation attribute is "optional" for all data elements within a record
- "all sizes are SPM" means that the size values are smallest permitted maximum values

NOTE 1 — Throughout this Clause, the abbreviation SPM is used, which means "smallest permissible maximum". The SPM value is intended to give implementers a lower limit on conforming implementations. Applications should not assume that implementations support capabilities beyond the SPM value unless prior arrangements have been made.

NOTE 2 — Some non-ISO/IEC 11404 datatypes, such as `ssd_record`, etc., are defined in Part 1, Core Features.

5.1 `papi_learner_contact_reference_type`

ISO/IEC 11404 definition

```
type papi_learner_contact_reference_type =
    papi_learner_identifier_type,
```

Description

This datatype defines a reference (or pointer) to PAPI Learner contact information.

Part 6, subclause 21.2, defines the minimum set of permissible values for this datatype. In addition, if an implementation claims conformance to Part 6, Data Element Registry, then Part 6, subclause 21.2 defines the permissible values for this data element..

5.2 `papi_learner_contact_info_type`

ISO/IEC 11404 definition

```
type papi_learner_contact_info_type =
ssd_record
( // All components are optional; all sizes are SPM
    my_contact_identifier_list : // database linking (key), SPM: 200
        papi_learner_identifier_type,
    contact_hid_list : // HID linking (cross-repository), SPM: 200
        papi_learner_hid_type,
    name_list : // learner's name(s), SPM: 40
        papi_learner_individual_name_type,
    telephone_list : // learner's telephone number(s), SPM: 15
        papi_learner_contact_telephone_type,
    email_contact_list : // learner's E-mail address(s), SPM: 15
        papi_learner_contact_email_address_type,
    postal_address_list : // learner's postal address(s), SPM: 10
```

```

        papi_learner_contact)postal_address_type,
        contact_bucket : // other information, SPM: 100
        papi_learner_bucket_type,
    ),

```

Description

PAPI Learner contact information is defined by this datatype.

The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **my_contact_identifier_list**: An internal database key for linking information.
- **contact_hid_list**: An external human identifier for correlating information across data repositories.
- **name_list**: The name of the learner.
- **telephone_list**: Telephone numbers associated with the learner.
- **email_contact_list**: E-mail addresses associated with the learner.
- **postal_address_list**: Postal addresses associated with the learner.
- **contact_bucket**: A "bucket" for adding name-value pairs that provides limited extension capabilities to PAPI Learner contact information. Part 6, subclause 21.3, defines the minimum set of permissible values for this datatype. In addition, if an implementation claims conformance to Part 6, Data Element Registry, then Part 6, subclause 21.3 defines the permissible values for this data element.

5.3 papi_learner_individual_name_type

ISO/IEC 11404 definition

```

type papi_learner_individual_name_type =
  ssd_record
(
  // note: all components are optional; all sizes are SPM values
  official : // e.g., { "Public" } { "Joseph" "Quincy" } - legal, SPM: 5
    papi_learner_individual_formal_name_type,
  full_formal : // e.g., "Mr. Joseph Q. Public, PhD" name/titles, SPM: 5
    papi_learner_individual_full_name_type,
  mrms_formal : // e.g., "Mr. Joseph Q. Public" - Mr./Ms. name, SPM: 5
    papi_learner_individual_full_name_type,
  short_formal : // e.g., "Mr. Public" - within formal group, SPM: 5
    papi_learner_individual_full_name_type,
  full : // e.g., "Joseph Q. Public" - in print, SPM: 5
    papi_learner_individual_full_name_type,
  sort_string : // e.g., "Public, Joseph Q.", SPM: 5
    papi_learner_individual_full_name_type,
  full_informal : // e.g., "Joe Public" - within a group, SPM: 5
    papi_learner_individual_full_name_type,
  short_informal : // e.g., "Joe" - directly to person, SPM: 5
    papi_learner_individual_full_name_type,
)
}

```

Description

The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **official**: The legal name of the learner. Example: The learner's name on his/her passport.
- **full_formal**: The full, formal name that includes titles.
- **mrms_formal**: A formal name that includes Mr., Ms., or equivalent titles.
- **short_formal**: A formal name that, typically, includes Mr., Ms., or equivalent titles, and the family name.
- **full**: The full name, as it would appear in public announcements.
- **sort_string**: The learner's name rearranged so that lexical ordering corresponds to name ordering. Example: "Last, First".
- **full_informal**: A full name within an informal setting.
- **short_informal**: A short informal name within an informal setting.

5.4 papi_learner_individual_formal_name_type

ISO/IEC 11404 definition

```

type papi_learner_individual_formal_name_type =
record
(
    primary : // Family name(s)
               characterstring(iso-10646-1), // string length SPM: 70
    secondary : // Given name(s)
                 characterstring(iso-10646-1), // string length SPM: 70
    locale : // Locale associated with name(s)
              papi_learner_locale_identifier_type,
),

```

Description

A formal name is defined as a "primary identifier" and a "secondary identifier". The terms "primary" and "secondary" are defined in ICAO, IATA, UN, and ATA standards for automated passport information. The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **primary**: The primary legal name(s) of a person.
- **secondary**: The secondary legal name(s) of a person.
- **locale**: The localization mapping identifier. NOTE — Applications should use an array of **papi_learner_individual_formal_name_type** instances to provide multilingual, multi-locale representations of a formal name. For example, in the **official** data element (see subclause 5.2) of the record **papi_learner_individual_name_type**, there are at least 5 (smallest permitted maximum) instances of **papi_learner_formal_name_type** — each of which may be used as a locale-specific representation of the **official** data element.

5.5 papi_learner_full_name_type

ISO/IEC 11404 definition

```

type papi_learner_individual_full_name_type =
record
(
  name: // Full name
    characterstring(iso-10646-1), // string length SPM: 140
  locale : // Locale associated with name(s)
    papi_learner_locale_identifier_type,
),

```

Description

A localized name representation. All sizes or limits are smallest permitted maximum values.

- **name:** The primary legal name(s) of a person.
- **locale:** The localization mapping identifier. NOTE — See note in **locale** data element in subclause 5.4.

Examples:

```

// Example of a single papi_learner_individual_full_name_type
// instance
{ "John Smith", "en" }

// Example of two papi_learner_individual_full_name_type
// instances as multi-locale representations of the same name
{ "Mr. Nakabayashi", "en-jp" }
{ "Nakabayashi-san", "jp-jp-iso-8859-1" }

// Example of two papi_learner_individual_full_name_type
// instances as multi-locale representations of the same name
{ "Katherine Sinitza", "en-US" }
{ "Kateryna Synytsya", "ru-UA-iso-646" }

```

5.6 papi_learner_contact_telephone_type

ISO/IEC 11404 definition

```

type papi_learner_contact_telephone_type =
record
(
  phone_number_type :
    papi_learner_identifier_kind_type,
  phone_number :
    characterstring(iso-646), // string length SPM: 100
  locale : // Locale associated with name(s)
    papi_learner_identifier_type,
),

```

Description

A telephone number. The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **phone_number_type**: The kind of phone number. Part 6, subclause 21.4, defines the minimum set of permissible values for this datatype. In addition, if an implementation claims conformance to Part 6, Data Element Registry, then Part 6, subclause 21.4 defines the permissible values for this data element.
- **phone_number**: The phone number, as defined by ITU-T E.164, and as extended by RFC 2421 for PBX phones. NOTE — This permits four types of phone addressing: (1) private numbering plan, e.g., "5551212", (2) private numbering plan with PBX extension, e.g., "5551212+123", (3) international numbering plan, e.g., "+12125551212", (4) international numbering plan with PBX extension, e.g., "+12125551212+123".
- **locale**: The localization mapping identifier. NOTE — See note in **locale** data element in subclause 5.4.

5.7 papi_learner_contact_email_type

ISO/IEC 11404 definition

```
type papi_learner_contact_email_type =
record
(
    email_address_type :
        papi_learner_identifier_kind_type,
    email_address :
        characterstring(iso-646), // string length SPM: 255
),
```

Description

An E-mail address. The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **email_address_type**: The kind of E-mail address. Part 6, subclause 21.5, defines the minimum set of permissible values for this datatype. In addition, if an implementation claims conformance to Part 6, Data Element Registry, then Part 6, subclause 21.5 defines the permissible values for this data element.
- **email_address**: The E-mail address. If no E-mail address type is specified, then RFC 822 (internet) E-mail addressing format is assumed.

5.8 papi_learner_contact_postal_address_type

ISO/IEC 11404 definition

```
type papi_learner_contact_postal_address_type =
ssd_record
( // note: all components are optional; all sizes are SPM
    postal_address_type :
        papi_learner_identifier_kind_type,

    // The addressee. Note: An application should harmonize
    // the values of postal addressee name, title, etc., with
    // learner name components.
    addressee : ssd_record
)
```

```

title :
  characterstring(iso-10646-1), // string length SPM: 35
name : record
(
  given : // Also known as a "secondary" name.
    characterstring(iso-10646-1), // string length SPM: 70
  family : // Also known as a "primary" name.
    characterstring(iso-10646-1), // string length SPM: 70
  suffix :
    characterstring(iso-10646-1), // string length SPM: 35
),
occupation :
  characterstring(iso-10646-1), // string length SPM: 70
function :
  characterstring(iso-10646-1), // string length SPM: 70
care_of_address :
  characterstring(iso-10646-1), // string length SPM: 70
),

// The organization.
organization : ssd_record
(
  name :
    characterstring(iso-10646-1), // string length SPM: 70
  activity :
    characterstring(iso-10646-1), // string length SPM: 70
  division :
    characterstring(iso-10646-1), // string length SPM: 70
),

// The delivery address.
delivery : ssd_record
(
  street : ssd_record
  (
    street_type :
      characterstring(iso-10646-1), // string length SPM: 35
    name :
      characterstring(iso-10646-1), // string length SPM: 70
    number :
      characterstring(iso-10646-1), // string length SPM: 20
  ),
  address :
    characterstring(iso-10646-1), // string length SPM: 70
  city :
    characterstring(iso-10646-1), // string length SPM: 35
  po_box :
    characterstring(iso-10646-1), // string length SPM: 20
  postcode :
    characterstring(iso-10646-1), // string length SPM: 20
  routing :
    characterstring(iso-10646-1), // string length SPM: 20
  office :
    characterstring(iso-10646-1), // string length SPM: 35
  territory :
    characterstring(iso-10646-1), // string length SPM: 35
  country :
    characterstring(iso-10646-1), // string length SPM: 35
)

```

```

    ),
    locale : // Locale associated with address(es)
             papi_learner_locale_identifier_type,
    ),

```

Description

A postal address, as defined by ISO/IEC 11180. The following components define this data element. All components are optional. All sizes or limits are smallest permitted maximum values.

- **postal_address_type**: The kind of postal address. Part 6, subclause 21.6, defines the minimum set of permissible values for this datatype. In addition, if an implementation claims conformance to Part 6, Data Element Registry, then Part 6, subclause 21.6 defines the permissible values for this data element.
- **addressee_***: The individual addressee of the postal address.
- **organization_***: The organization associated with the postal address.
- **delivery_***: The delivery address.
- **locale**: The localization mapping identifier. NOTE — See note in **locale** data element in subclause 5.4.

NOTE — An application should harmonize the values of the learner postal addressee name, title, etc., with the learner name components.

6 Annex A: Examples (informative)

This Annex is informative and not normative.

6.1 ISO/IEC 11404 data set

The following is sample ISO/IEC 11404 data set:

```
// ISO/IEC 11404 data set
(
  my_contact_identifier_list =
  (
    (
      identifier_kind = "pointer",
      identifier_value = "0x12345678"
    ),
  ),
  contact_hid_list =
  (
    (
      identifier_kind = "ISO_IEC_21484_13",
      identifier_value = "00112233"
    ),
  ),
  name_list =
  (
    (
      official_name =
      (
        primary = "Public",
        secondary = "Joseph Q.",
      ),
      sort_name =
      (
        name = "Public, Joseph Q.",
        locale = "en-US",
      ),
      short_informal_name =
      (
        name = "Joe",
        locale = "en-US",
      ),
    ),
  ),
  telephone_list =
  (
    (
      context_label = "home",
      identifier_kind = "voice",
      phone_number = "+12125551212"
    ),
    (
      context_label = "work",
```

```

        identifier_kind = "voice",
        phone_number = "+12125551313"
    ),
    (
        context_label = "work",
        identifier_kind = "fax",
        phone_number = "+12125551414"
    ),
    (
        context_label = "emergency",
        identifier_kind = "voice",
        phone_number = "+12125551515"
    ),
),
email_contact_list =
(
    (
        context_label = "home",
        email_address_type = "rfc822",
        email_address = "foobar@mail.com"
    ),
    (
        context_label = "work",
        email_address_type = "rfc822",
        email_address = "foo@bar.com"
    ),
),
postal_address_list =
(
    (
        context_label = "school",
        addressee.name.given = "Joseph Q.",
        addressee.name.family = "Public",
        delivery.street.street_type = "Street",
        delivery.street.name = "Main",
        delivery.street.number = "123",
        delivery.city = "New York",
        delivery.territory = "NY",
        delivery.routing = "10001",
        delivery.country = "USA",
    ),
),
contact_bucket =
(
    (
        name = "us_social_security_number",
        value = "123-45-6789",
    ),
    (
        name = "payment_method",
        value = "371234567890123/200212/John Q. Public",
    ),
),
),

```

6.2 XML coding

The following is a sample XML data instance:

```
<!-- XML data instance ("..." is replaced by outer tags) -->
<...>
  <my_contact_identifier_list>
    <contact_identifier>
      <identifier_kind>pointer</identifier_kind>
      <identifier_value>0x12345678</identifier_value>
    </contact_identifier>
  </my_contact_identifier_list>
  <my_contact_hid_list>
    <learner_hid>
      <identifier_kind>ISO_IEC_21484_13</identifier_kind>
      <identifier_value>00112233</identifier_value>
    </learner_hid>
  </my_contact_hid_list>
  <name_list>
    <name>
      <official_name>
        <primary>Public</primary>
        <secondary>Joseph Q.</secondary>
      </official_name>
      <sort_name locale="en-US">Public, Joseph Q.</sort_name>
      <short_informal_name locale="en-US">Joe</short_informal_name>
    </name>
  </name_list>
  <telephone_list>
    <telephone>
      <context_label>home</context_label>
      <identifier_kind>voice</identifier_kind>
      <phone_number>+12125551212</phone_number>
    </telephone>
    <telephone>
      <context_label>work</context_label>
      <identifier_kind>voice</identifier_kind>
      <phone_number>+12125551313</phone_number>
    </telephone>
    <telephone>
      <context_label>work</context_label>
      <identifier_kind>fax</identifier_kind>
      <phone_number>+12125551414</phone_number>
    </telephone>
    <telephone>
      <context_label>emergency</context_label>
      <identifier_kind>voice</identifier_kind>
      <phone_number>+12125551515</phone_number>
    </telephone>
  </telephone_list>
  <email_contact_list>
    <email_contact>
      <context_label>home</context_label>
      <email_address_type>rfc822</email_address_type>
      <email_address>foobar@mail.com</email_address>
    </email_contact>
    <email_contact>
      <context_label>work</context_label>
```

```

        <email_address_type>rfc822</email_address_type>
        <email_address>foo@bar.com</email_address>
    </email_contact>
</email_contact_list>
<postal_address_list>
    <postal_address>
        <context_label>school</context_label>
        <addressee>
            <name>
                <given>Joseph Q.</given>
                <family>Public</family>
            </name>
        </addressee>
        <delivery>
            <street>
                <number>123</number>
                <name>Main</name>
                <street_type>Street</street_type>
            </street>
            <city>New York</city>
            <territory>NY</territory>
            <routing>10001</routing>
            <country>USA</country>
        </delivery>
    </postal_address>
</postal_address_list>
<contact_bucket>
    <bucket>
        <name>us_social_security_number</name>
        <value>123-45-6789</value>
    </bucket>
    <bucket>
        <name>payment_method</name>
        <value>371234567890123/200212/John Q. Public</value>
    </bucket>
</contact_bucket>
</...>

```

6.3 DNVP coding

The following is a sample DNVP data instance:

```

#### DNVP data instance ("..." is replaced by outer context)
...my_contact_identifier.__begin:
...my_contact_identifier.identifier_kind: pointer
...my_contact_identifier.identifier_value: 0x12345678
...my_contact_identifier.__end:
...my_contact_hid.__begin:
...my_contact_hid.identifier_kind: IEEE_1484_13
...my_contact_hid.identifier_value: 00112233
...my_contact_hid.__end:
...name.__begin:
...name.official_name.primary: Public
...name.official_name.secondary: Joseph Q.
...name.sort_name.name: Public, Joseph Q.
...name.sort_name.locale: en-US
...name.short_informal_name.name: Joe

```

```
....name.short_informal_name.locale: en-US
....name.__end:
....telephone.__begin:
....telephone.context_label: home
....telephone.identifier_kind: voice
....telephone.phone_number: +12125551212
....telephone.__end:
....telephone.__begin:
....telephone.context_label: work
....telephone.identifier_kind: voice
....telephone.phone_number: +12125551313
....telephone.__end:
....telephone.__begin:
....telephone.context_label: work
....telephone.identifier_kind: fax
....telephone.phone_number: +12125551414
....telephone.__end:
....telephone.__begin:
....telephone.context_label: emergency
....telephone.identifier_kind: voice
....telephone.phone_number: +12125551515
....telephone.__end:
....email_contact.__begin:
....email_contact.context_label: home
....email_contact.email_address_type: rfc822
....email_contact.email_address: foobar@mail.com
....email_contact.__end:
....email_contact.__begin:
....email_contact.context_label: work
....email_contact.email_address_type: rfc822
....email_contact.email_address: foo@bar.com
....email_contact.__end:
....postal_address.__begin:
....postal_address.context_label: school
....postal_address.addressee_name_given: Joseph Q.
....postal_address.addressee_name_family: Public
....postal_address.delivery_street_id_number: 123
....postal_address.delivery_street_name: Main
....postal_address.delivery_street_type: Street
....postal_address.delivery_city: New York
....postal_address.delivery_territory: NY
....postal_address.delivery_routing: 10001
....postal_address.delivery_country: USA
....postal_address.__end:
....contact_bucket.__begin:
....contact_bucket.name: social_security_number
....contact_bucket.value: 123-45-6789
....contact_bucket.__end:
....contact_bucket.__begin:
....contact_bucket.name: payment_method
....contact_bucket.value: 371234567890123/200212/John Q. Public
....contact_bucket.__end:
```

7 Annex B: Document development (informative)

This Annex is informative and not normative.

NOTE — This Annex will be removed prior to publishing of this Standard.

7.1 Revision history

- **Draft 8, 2001-11-25**, the current draft. This draft is a portion of the split of PAPI Learner drafts 6 and 7.

7.2 Release notes for this document

The following notes apply to this release of this document:

- This document is substantially complete.

7.3 Resolved issues

The following issues have been resolved:

- Split of PAPI Learner into separate documents.

7.4 Open issues

The following issues are outstanding:

- The "vCard" specification needs to be investigated for XML bindings.

7.5 Comments on this document

All comments are appreciated. Please return all comments on this release of this document by **Friday, 2002-02-22 23:00 UTC**. The Technical Editor may be contacted at the following:

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