Data Interchange Handbook

1.INTRODUCTION

This document contains a set of specifications for the data interchange among Alliance member and partner organizations.

1.1.Terminology

The words "transport/implementation" indicates the form in which a particular set of data is transmitted (e.g. CSV, XML, etc.). While general rules (e.g. formatting of codes or locations) apply to each and every transport/implementation consistently, additional rules can apply to a single t/i.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

More in detail: "must" means that the definition is an absolute requirement of the specification.; "should" means that some behaviour is recommended but not mandatory

1.2.Objectives

The formats for data interchange must allow any volunteer exchange organisations to communicate between each others by automatic or semi automatic import /export procedures. In particular:

- they must be concisely and clearly documented.
- they must be kept simple to facilitate integration and adoption
- they must provide a human-readable transports/implementation, as a fallback solution, for all those organizations that can't or wouldn't accept to use the formats
- they must rely on a common and agreed-upon subset of data/metadata to allow for proper management of the information transmitted: working codes for the organizations, work/project types, etc.
- they must ensure that all the transports/implementation formats for a given dataset supply the same data, with the same level of detail and consistency
- the specifications will be available for each organization on their request
- any request for modification of this standard can be presented at an Alliance instance
- provide international language support UTF-8
- they must make no assumptions on underlying technical details or implementations which could hinder interoperability between different systems and platforms

1.3.Disclaimer

Please note that while the greatest care has been taken in the drafting of this documentation, some mistakes are inevitable. This means that any error or omission, especially for what it concerns lists of organizations, countries, work types, tools, etc. should not be considered as a statement, political, technical or whatever, but simply as a byproduct of this work.

Moreover it must be noted that this is technical documentation and that it doesn't imply, affirm or endorse any particular position with regard to political or organizational issues, these being a matter of concern of Alliance's bodies and offices.

1.4.Annexes

The following annexes are to be considered an integral part of this document. They're omitted here for the sake of clarity an brevity, but can be downloaded at:

1.4.1 Annex A – List of organization codes

http://crashdown.dyndns.org/public/adih annexa.pdf

1.4.2 Annex B – Project types

http://crashdown.dyndns.org/public/adih annexb.pdf

1.4.3.Annex C – Work types

http://crashdown.dyndns.org/public/adih annexc.pdf

1.4.4 Annex D – Occupation type

http://crashdown.dyndns.org/public/adih annexd.pdf

2.GENERAL RULES

This set of rules applies to all transports/implementations.

2.1. Formatting

2.1.1.Data types

Please note that, in the context of this document, the type for the fields, used in the detail tables for VEFs, Free Place List and the Project exchange form, is defined as follows:

- A: Alphanumeric
- N: Numeric
- B: Boolean
- D: Date

2.1.2 Dates

Dates should be stored in ISO8601 "short" notation, with hyphens (e.g. January 31st, 2009 is "2009-01-31"). Existing applications are responsible for converting dates in this format to/from their internal standard.

2.1.3 Boolean values

Boolean values express a "true" condition when containing "1"; "false" applies to 0. Other values are not supported and can be a cause for rejection.

2.1.4 Numeric values

Integer numbers should always be specified as such, with no decimal separators or grouping of digits allowed. Floating point numbers should use a dot as decimal separator

2.1.5 External references

- Countries are specified with their ISO Alpha-3 code.
- Languages should be encoded in ISO-639-2 standard
- Currencies should be identified by their ISO-4217 code
- Airports, where indicated, should be identified by their IATA code (e.g. FCO = Rome Fiumicino, LAX = Los Angeles, etc.).

2.1.6 Language

All the information contained in the import/export files should be in English

2.1.7 Geographic coordinates

Geographic coordinates must be expressed in "Decimal Degree" notation. ¹.

2.1.8 Measurements

All measurements, unless a specific requirement is present, should be expressed in the metric system.

2.1.9 Project Codes

This is the code which, together with the start and end dates and organisation, identifies the project. Each import procedure must verify the prior existence of this data and propose manual insertion in case duplicates are found.

2.1.10 Project IDs

A project ID is an identifier that *uniquely* identifies the project. It is an MD5 hash of several information: organization code, project code, start date, end date. The source of the hash is a colon-separated string, containing all the items, each with all leading and trailing spaces removed.

_

E.g. 41.098975

Example:

Given the project ABC-MTV 01 (12/02/2011 to 10/08/2011) organized by a member whose code is "AXZ", we first build the hash "source" string:

AXZ:ABC MTV-01:2011-02-12:2011-08-01

Then we can compute the MD5 hash of this string (implementations for computing MD5 hashes are available in a multitude of languages) which is:

6a34b3c53f7737f9a429d5bc1ccca2b1

The hash must be created when the project is first inserted in the host organisation project database and *never* changes, even if one of the identifying components (code, dates, etc.) is subsequently modified (e.g. if the project changes dates)

2.1.11 Item Lists

When the need arises to specify more than one element of the same type (e.g. work type, language, etc.), the way this kind of information is encoded must be described by the specific transport/implementation. As a general rule, different items in a list should be presented in order of relevance.

2.2. Verification and validation

2.2.1 General

Interchange files, in any transport/implementation must be validated by the receiving party (generally a user application or module) before import.

2.2.2 Encoding

All transport/implementations must use the UTF-8 character set and properly encode non-Latin characters

2.2.3 Empty elements

In order to facilitate import/export, empty values (i.e. values containing no data, actually an empty string) are generically allowed. Specific formats and/or transport/implementations may specify exceptions to this rule. The proper handling of these values is up to the receiving party.

2.2.4 Example data

Please refer to the corresponding sections and attached files for examples of the specific transport/implementations.

2.3 Notes on specific transport/implementation

2.3.1 XML

The XML structure is flat, with all the fields, identified by their Name/ID, organized under a root element. No attributes are ordinarily used. Text elements must not contain formatting characters in any form: CR/LF, TAB, etc. are banned and must be filtered out or replaced before export. Text elements must not contain HTML code. Entities, when specified, must be inserted according to the XML specification (i.e. no HTML entities can be used if they have not been defined in the file itself). Item lists must be specified as more elements with the same tag, in order of relevance.

2.3.2 CSV

The order of the fields is the same as in the tables. Text elements must not contain formatting characters in any form: CR/LF, TAB, etc. are banned and must be filtered out or replaced before export. All elements use a comma as field separator and double quotes as field delimiters. Quotes inside text elements must be escaped and replaced with a pair of double quotes (e.g. "John "Fat" Doe" becomes

"John "Fat" Doe"). Items marked as optional must be present in the export file to avoid ambiguities, but can be empty. The proper interpretation of empty optional elements is up to the receiving party.

2.3.3 HTML/Microformat/XHTML

This is a standard HTML/XHTML file, where the Name/IDs listed above are specified as class names for those HTML elements that contain the data:

```
<div class="code">ABC-123</div>
<div class="location">Utopia Planitia, Mars</div>
```

XHTML compliance is of course mandatory.

2.3.4 TXT

This format should follow the convention:

```
<FieldId>:<Space><Field value><end of line>
```

Like in:

Code: ABC-123

2.4 FILES NAMES

- PEF
 - if one project data
 - PEF_projectcode_yyyymmdd
 - several projects
 - PEF_organizationcode_yyyymmdd
- FPL
 - FPL__organizationcode_yyyymmdd
- VEF
 - o VEF_organizationcode_volunteername

the names and codes must be cleaned from space trim() in the field name

organization code as it is in transmitted data organisation_code node <organization_code></organization_code>

projectcode as it is in transmitted data code node <code></code>

yyymmdd as in date_filed node <date_filed></date_filed>

extension according the transmitted format XML,CSV,XLS,TXT,DOC etc...

3. Volunteer Exchange Form (VEF)

3.1.Definition

The dataset of VEFs is made up of the information in the following table. For the limits and additional details that concern the encoding of this information in a given transport/implementation, please see the following section. Each interchange file contains a single VEF.

Name/ID	Description	Type	Required
sender	This field contains the code of the organization the VEF originates from. The code must	A	*
	correspond to one of the organization codes defined in Annex A		
version	The format version for this file	A	*
application	The code or name of the placement system that generated the file	A	*
lastname	Last name (surname) of the volunteer	A	*
firstname	First name of the volunteer. For all purposes this should include any middle name, if present	A	*
birthdate	The date the volunteer was born	D	*
birthplace	Birthplace of the volunteer	A	*
address1	First line of permanent address	A	*
address2	Second line of permanent address	A	
zip	Zip code for permanent address	A	*
city	City for permanent address	A	*
prov_rgn_state	Province/Region/State	A	
country	Country for permanent address	A	*
email	e-mail address	A	*
telephone	Permanent telephone number	A	*
telephone2	Additional phone number	A	
telephone3	Additional phone number	A	
cellphone	Mobile phone number	A	
language1	First language indicated on the VEF	A	*
language2	Second language indicated on the VEF	A	
language3	Third language indicated on the VEF	A	
langlevel1	Status/knowledge of the first language (1 to 4, 1 = almost none, 4 = very skilled)	N	*
langlevel2	Status/knowledge of the second language (1 to 4, 1 = almost none, 4 = very skilled)	N	
langlevel3	Status/knowledge of the third language (1 to 4, 1 = almost none, 4 = very skilled)	N	
date filed	The date on which the VEF was first filed by the sending organization	D	*
sex	Sex of the volunteer (M/F)	A	*
emergency contact	Emergency contact. Should include at least name and telephone number	A	*
passport	Passport info (number, Issued on (date), Issued by ,Valid until (date))	A	
occupation	Occupation of the volunteer (see Annex D	A	
tmp address1	Temporary address	A	
tmp address2	First line of temporary address	A	
tmp zip	Second line of temporary address	A	
tmp city	Zip code for temporary address	A	
tmp country	City for temporary address	A	
tmp until	Date until which the temporary address info should be considered valid	D	
disability	Volunteer has a certain degree of disability	В	
special needs	Special needs of the volunteer (health conditions, allergies, etc.)	A	
experience	Past experience	A	*
motivation	Motivation	A	*
remarks	Remarks from volunteer	A	
nationality	Nationality	A	*
choice1	Choice #1 with project code The code must correspond to one of the project codes inserted in host project database	A	*
choice2	Choice #2 with project code The code must correspond to one of the project codes	A	
choice3	inserted in project database Choice #3 with project code The code must correspond to one of the project codes	A	
choice4	inserted in project database Choice #4 with project code The code must correspond to one of the project codes	A	
choice5	inserted in project database Choice #5 with project code The code must correspond to one of the project codes		
	inserted in project database	A	
choice6	Choice #6 with project code The code must correspond to one of the project codes inserted in project database	A	
choice7	Choice #7 with project code The code must correspond to one of the project codes inserted in project database	A	
choice8	Choice #8 with project code	A	
choice9	Choice #9 with project code	A	
	Choice #10 with project code	A	

place_any_prj	Place volunteer on any project if none of the preferences indicated can be satisfied	В	
place_any_prj_work	The code of the work type preferred by the volunteer if none of the preferences indicated	A	
	can be satisfied Must respect work specification		
place_any_prj_from	The date from which the volunteer is available for other projects, if none of the preferences	D	
	indicated can be satisfied		
place_any_prj_to	The date until which the volunteer is available for other projects, if none of the preferences	D	
	indicated can be satisfied		
place_any_prj_coun	Country preferred by the volunteer if none of the preferences indicated can be satisfied	A	
try			
together_with	Volunteer wants to participate together with the volunteer indicated	A	
req_sent_by	Name of outgoing officer	A	*
req_sender_email	email of outgoing officer	A	*

3.2.Notes

XML: the root element is named *vef*

4. Free Places List (FPL)

4.1.Definition

The dataset of Free Places List is made up of the information in the following table. For the limits and additional details that concern the encoding of this information in a given transport/implementation, please see the following section. A Free Place List contains several entries, one for each project it references. The manner in which the single entries are separated and presented, together with global information on the whole Free Place List depends on the given transport/implementation.

Name/ID	Description	Type	Required
network	This field contains the code of the network the database file references (always "AL" or	A	*
	"ALLIANCE"		
application	Management software name (e-vet, OPS, E-placement)	A	*
date_filed	The date on which the database file is generated and at which the informations contained	D	*
	within are to be considered valid		
version	The format version for this file, 1.0 in this release	Α	*
fpl_sent_by	The name of officer for contact	A	
fpl_sender_email	The email of officer for contact	A	
organization	The name for the organization that manages the project,	A	*
	see Annex A - List of organisation codes		
organization code	The code for the organization that manages the project,	A	*
	see Annex A - List of organisation codes		
project_id	The id which uniquely identifies the camp in the host organisation project database,	A	*
	represented as an MD5 hash of the identifying original data (organisation, code,		
	location). The hash must be created when the project is first inserted in the host		
	organisation project database and never changes, even if one of the identifying		
	components (code, dates, etc.) is modified (see paragraph 2.1.10)		
code	The code which uniquely identifies the camp in the host organisation project database	A	*
start_date	The starting date of the project	D	*
end_date	The ending date of the project	D	*
numvol	The total number of volunteers for this project (the sum of free, taken and reserved	N	*
	places)		
free_m	The number of free places for male volunteers	N	*
free_f	The number of free places for female volunteers	N	*
free_teen	The number of free places for teenagers	N	*
reserved	Total number of place reserved until 1 of June	N	-
no_more_from	A list of countries from which volunteers are no longer accepted on this project	A	1
remarks	General remarks	A	-
last_update	The date on which the project is updated in original database	D	*

4.2.Notes

XML: the root element is named *freeplaceslist*. Single projects are enclosed in a *project* element and grouped under a *projects* element that in turn is a direct descendant of the root *Freeplacelist* element. The hierarchy must be structured as follows:

```
<start_date>2011-01-11
                  <end_date>2011-01-23</end_date>
                  <numvol/>
                  <free_m/>
                  <free_f/>
                  <free_teen/>
                  <reserved>2</reserved>
                  <no_more_from/>
                  <notes>Cancelled 2010-11-26</notes>
                  <last_update>2010-11-26</last_update>
            oiect>
            </project>
                  ct_id>15234cb9a1b76499f1d988de767ee45f/project_id>
                  <code>WF05</code>
                  <start_date>2011-01-11
                  <end_date>2011-01-23</end_date>
                  <numvol>15</numvol>
                  <free_m>2</free_m>
                  <free f>7</free f>
                  <free_teen>0</free_teen>
                  <no_more_from/>
                  <notes/>
                  <last_update>2010-11-26</last_update>
            </project>
      </projects>
</freeplaceslist>
```

CSV: The fields *sender*, *date filed* and *version*, must be repeated for each entry.

HTML/Microformat/XHTML: The XML structure is mostly flat, organized under a root element named *freeplaceslist*. Single projects are enclosed in a *project* element and grouped under a *projects* element that in turn is a direct descendant of the root *freeplaceslist* element

This is a standard HTML/XHTML file, where the Name/IDs listed above are specified as class names for those HTML elements that contain the data:

The file should be parsed looking for all the elements whose class name is *project*, and starting from each of those, the child elements should be inspected.

TXT: A small header section at the beginning of the file should contain the fields *sender*, *date_filed* and *version*. A blank line separates the header from the first entry and the single entries.

5.Project Exchange Form (PEF)

5.1. Definition

The dataset of the PEF is made up of the information in the following table. For the limits and additional details that concern the encoding of this information in a given transport/implementation, please see the following section.

A PEF file contains several entries, one for each project it references. The manner in which the single entries are separated and presented, together with global information on the whole (PEF) fil depends on the given transport/implementation.

A PEF interchange file can contain projects for. The Application (sender/originator) of the file is identified by the application field.

Name/ID	Description	Typ e	Required
network	This field contains the code of the network the database file references (always "AL" or "ALLIANCE"	A	*
application	Management software name (e-vet, OPS, E-placement)	A	*
date_filed	The date on which the database file is generated and at which the informations contained within are to be considered valid	D	*
version	The format version for this file,1.0 in this release	A	*
pef_sent_by	The name of officer for contact	A	
pef sender email	The email of officer for contact	A	
organization	The name for the organization that manages the project, see Annex A - Organisations	A	*
organization_code	The code for the organization that manages the project, see Annex A - Organisations	A	*
project_id	The id which uniquely identifies the camp in the host organisation project database, represented as an MD5 hash of the identifying original data (organisation, code, location). The hash must be created when the project is first inserted in the host organisation project database and never changes, even if one of the identifying components (code, dates, etc.) is modified (see paragraph 2.1.10)	A	*
code	The code which uniquely identifies the camp in the host organisation project database	A	*
project_type	The type of the project/workcamp, see Annex B – Project Types		
work	The work type of the project/workcamp several work type have to be comma- separated, see Annex C – Work types	A	*
start date	The starting date of the project	D	*
end date	The ending date of the project	D	*
name	The name/title for the project	Α	*
location	The place where the project/workcamp will take place	A	*
country	The country where the project/workcamp will take place	A	*
region	The region of a country where the project/workcamp will take place	Α	*
languages	A list of languages requested for the project	Α	*
extrafee	The extrafee element specify the amount of the (possible) extra-fee for participation. If this field is present, also extrafee currency is mandatory.	N	
extrafee_currency	The extrafee element specify the currency of the (possible) extra-fee for participation. If this field is present, also extrafee is mandatory.	A	
min_age	This field defines the minimum age required for participation in the camp/project.—Default value "1"	N	*
max_age	This field defines the maximum age allowed for participation in the camp/project.—default value "99"	N	*
disabled_vols	This field indicates if the project/workcamp type/work/location allows for the participation of disabled volunteers. <i>Additional informations should be provided in the "description" field</i>	В	
numvol	Number of total (males + females) places for volunteers	N	*
vegetarian	Indicates if vegetarian food will be available.	В	
family	Indicates if whole families, with kids, are allowed.	В	
description	A medium sized text with a description of the project The "description" field should conform to Alliance guidelines and possibly include separate sections on: Partner, Work, Accomodation and food, Location and Leisure, Requirements. It is mandatory to fill in either the <i>description</i> field or the <i>descr_*</i> fields. As a temporary measure, receiving parties should not expect to receive the sections properly separated in the four corresponding elements, even if this behaviour is strongly recommended and will become mandatory in a future release.	A	* Only required if the descr_* fields are not used

descr_partner	Description of the partner organizing/hosting the project	A	* Only required if the description field is not used
descr_work	Description of work	A	* see above
descr_accomodation_and_food	Description of accomodation and food	A	* see above
descr_location_and_leisure	Description of location and òeisure	A	* see above
descr_requirements	Description of specific requirements	A	* see above
airport	The nearest airport	A	
station	The nearest terminal	A	
numvol_m	Number of places available for male volunteers	N	
numvol_f	Number of places available for male volunteers	N	
max_vols_per_country	Maximum number of volunteers per nationality	N	
max_teenagers	Maximum number of teenager volunteers	N	
max_national_vols	Maximum number of national (local) volunteers	N	
lat_ project	Latitude of the project location	N	
lng_project	Longitude of the project location	N	
notes	Short public remarks for the project	A	
lat_station	Latitude of the nearest terminal	N	
lng_station	Longitude of the nearest terminal	N	
bi_tri_multi	Some project are reserved only for partners	В	

5.2.Notes

XML: The root element is named *projectform*. Single projects are enclosed in a *project* element and grouped under a *projects* element that in turn is a direct descendant of the root *projectform* element. Item lists must be specified as more elements with the same tag, in order of relevance. The hierarchy must be structured as follows:

```
<?xml version="1.0"?>
projectform>
  <network>Alliance/network>
  <appli>E-vet</appli>
  <date_filed>2011-01-09</date_filed>
  <version>1.0</version>
  <organization>WF_Iceland</organization>
  <Organization_code>WF</Organization_code>
  <pef_send_by>WF Toti</pef_send_by>
  <pef_sender_email>workcamps@wf.is</pef_sender_email>
  cts>
      <code>WF COL 01</code>
            project_type>STV
            <work>RENO,SOCI,KIDS,MANU,ART </work>
            <start date>2010-07-10</start date>
            <end_date>2010-07-23</end_date>
            <name>TIERRA BOMBA - ISLAND IN THE CARIBBEAN OCEAN/name>
            <location>CARTAGENA DI INDIAS</location>
            <country>CO</country>
            cprov_rgn_state>North/prov_rgn_state>
            <languages>en,es</languages>
            <extrafee>160</extrafee>
            <extrafee_currency>EUR</extrafee_currency>
            <min_age>18</min_age>
            <max_age>70</max_age>
            <disabled vols>0</disabled vols>
            <numvol>10</numvol>
            <vegetarian/>
            <family>0</family>
            <description>TIERRA BOMBA is a small beautiful island located in the ..
                  Work: From 9.00 pm to 12.00 in the morning the work will \&\#x2026;
                  We will be staying in ...
                  We will organize excursions...
            </description>
            <partner>TIERRA BOMBA is a small beautiful island located in the ../partner>
```

```
<work>Work: From 9.00 pm to 12.00 in the morning the work will &#x2026;</work>
             <accomodation_and_food>We will be staying in &#x2026;</accomodation_and_food>
             <location and leisure>We will organize excursions&#x2026;</location_and leisure>
             <requirements></requirements>
             <airport>CGI</airport>
             <station>CARTAGENA DI INDIAS/station>
             <numvol_m>5</numvol_m>
             <numvol_f>5</numvol_f>
             <max_vols_per_country>3</max_vols_per_country>
             <max_teenagers>0</max_teenagers>
             <max_national_vols>1</max_national_vols>
             <lat_project/>
             <lng_project/>
             <notes/>
             <lat_station/>
             <lng_station/>
             <bi_tri_multi>0</bi_tri_multi>
      </project>
  </projects>
</projectform>
```

CSV: The fields network, date filed, version and author, must be repeated for each entry.

HTML/Microformat/XHTML: The hierarchy must be structured as follows:

The file should be parsed looking for all the elements whose class name is *project*, and starting from each of those, the child elements should be inspected.

TXT: A small header section at the beginning of the file should contain the fields *network*, *date_filed*, *version* and *author*. A blank line separates the header from the first entry and the single entries.

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