

ANNEX II

Specification of the E112-DB file layout

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0. Introduction

This document specifies the layout of the information file to be supplied by providers of publicly available fixed telephone networks or services (Providers) to authorities responsible for emergency services, with the purpose of establishing and maintaining a support database for location of callers to the single European 112 emergency number.

The above-mentioned database is hereinafter referred to as E112 – DB.

Information supplied by Providers corresponds to data available in their registry systems on the date of submission.

1. Abbreviations

ANSI	–	American National Standards Institute
CLI	–	Calling Line Identification
DDI	–	Direct Dialling In
FTP	–	File Transfer Protocol
IEC	-	International Electrotechnical Commission
ISO	–	International Organization for Standardization
MSN	–	Multiple Subscriber Number
WGS84	–	World Geodetic System Datum 84 (reference geocentric origin)

2. Format of data file

The information file shall be type CVS (comma separated value), format ISO/IEC 8859-1 (ANSI).

Fields shall be separated by “;” and shall not exceed sizes indicated in the table defined in point 5.1. In case the specified size is exceeded, fields shall be truncated.

All fields for which no information exists shall be left empty.

The file shall have a variable format, as field size indicated in the layout corresponds to the maximum size allowed for the different fields, not to a standard field size. Fields must not be filled in with spaces on the right to make up the maximum size allowed.

3. Frequency of submission

Where data to be provided is altered, Providers must send the respective records by the end of the following working day.

Where justified by the volume of information, several daily files may be supplied. Void files (without records) may also be supplied where there are no data to be transferred, in order to ensure that files are sent at least every seven calendar days.

4. Name of data file

The file name format shall be as follows:

[Service]_[Name of operator]_[Date of submission of information]_[File identifier].csv

The elements of the file name shall not exceed the sizes indicated in the header description table defined in point 5.1.

Example: 112_OPERX_20070601_00001.csv

5. Description of data file

5.1 Record design

Header

Description	Maximum size	Comments
Service identification	112 (3)	
Name of operator	X(8)	Operator code: values (always upper case – this field is case sensitive); (See point 5.2.3)
Date of submission of information	X(8)	Format: yyyymmdd
Identifier	X(5)	Single and sequential file identifier, which must be filled in with 5 digits, starting with 00001.

Detail

Description	Maximum size	Comments
Operation (*)	X(1)	This field may take the following values (always upper case – this field is case sensitive): n – new record e – record to be removed a – record to be altered l – all records of the operator are to be listed (Ver ponto 5.2.7)
Telephone number (*)	N(9)	According to the NNP (National Numbering Plan). Where the number shows less than 9 digits, spaces must not be added to make up 9 positions, being submitted the existent number of digits.
Main Line Telephone number	N(9)	Compulsory where the telephone number is a DDI extension. Where the number shows less than 9 digits, spaces must not be added to make up 9 positions, being submitted the existent number of digits. (See point 5.2.5)
Address Terms (**)	X(3)	This field may take the following values (exactly as indicated – this field is case sensitive): Ab - Abarracamento Al - Alameda Alt - Alto Arr - Arruamento Atl - Atalho

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		Av - Avenida Az - Azinhaga Br - Bairro Bc - Beco Boq - Boqueirão Cab - Cabo Cai - Cais Cc - Calçada Cch - Calçadinha Cam - Caminho Cp - Campo Cnd - Canada Csl - Casal Cir - Circular Cln - Colónia Cpx - Complexo Doc - Doca Em - Empreendimento Esc - Escada Ech - Escadinhas Epl - Esplanada Etc - Estação Est - Estrada Fte - Fonte Her - Herdade Imp - Impasse Jd - Jardim Lad - Ladeira Lg - Largo Lom - Lomba Lbo - Lombo Lu - Lugar Mrc - Mercado Mte - Monte Pda - Parada Pq - Parque Pas - Passeio Pto - Pátio Pav - Pavilhão Pic - Pico Pte - Ponte Pc - Praça Pt - Praceta Pra - Praia 1Tv - Primeira Travessa Prl - Prolongamento Qlh - Quelho Qt - Quinta Qts - Quintas Rmp - Rampa Rot - Rotunda R - Rua Tap - Tapada Ter - Terreiro Til - Til
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		Trn - Transversal Tv - Travessa Uz - Urbanização Vrd - Vereda Via - Via Vie - Viela Vil - Vila Zn - Zona
Address (*)	X(70)	
Building number (**)	X(11)	
Floor (**)	X(5)	
Apartment (**)	X(6)	
Building (**)	X(20)	
Place (*)	X(50)	
Post code (*)	N(7)	With 4 or 7 digits in format 9999 or 9999999. Where only 4 digits are shown, spaces must not be added to make up the 7 positions of the maximum size, being submitted the existent 4 digits in format 9999.
Post designation (*)	X(50)	
Type of Service (**)	X(3)	This field may take the following values (the first position is lowercase as indicated – this field is case sensitive): a01 – Single line a02 – Primary access with DDI a03 – Basic access with DDI/MSN a12 – Primary access without DDI a13 – Basic access without DDI a05 – DDI extension a06 – Public pay-phone
Geographic Coordinates (**)	X(18)	

Footer

Description	Maximum size	Comments
Total number of file records	N(10)	

5.2 Notes

5.2.1 Compulsory fields

Fields marked with (*) must be filled in.

5.2.2 Optional fields

Fields marked with (**) are not compulsory; however, absence of this data does not allow the correct ordering of records where more than one number must be informed.

5.2.3 'Name of operator' field – possible values and rules for filling fields in

For the purposes of the E112 –DB, the following codes have been allocated to each of the providers¹ already registered. According to the specification established for the E112-DB, **these codes shall not exceed an 8-character size.**

OPERATOR	OPERATOR CODE
AR Telecom	ART
Broadnet	BROADNET
Cabo TV Madeirense	CTVM
Cabovisão	CBV
Colt Telecom	COLT
Equant	QUANT
G9SA	G9SA
Neuvex	NEUVEX
Novis Telecom	NOVIS
Onitelecom	ONI
Optimus	OPTIMUS
PT Comunicações	PTC
PT Prime	PTP
Radiomóvel	RADMOV
Refer Telecom	REFER
Telemilénio (Tele2)	TELE2
TMN	TMN
TV Cabo Portugal	TVC
Vodafone	VODA

These codes must be used with the allocated number of characters. For example:

- Name of data file: **112_OPR_20070524_00001**
- Header of data file: **112;OPR;20070524;00001**

Note: For the purpose of E112-DB validation, the strings “OPR” and “OPR ” are not deemed to be the same, consequently if “OPR ” is used an error will occur in the Operator code field.

5.2.4 Address

The Address Terms, Building number, Floor, Apartment and Building elements may be sent in separate fields or combined in the Address field.

5.2.5 DDI Extension

Where the telephone number is a DDI extension, the Main Line Telephone number must be filled in and the type of service must be filled in with “a05”.

In these situations, each DDI record shall be sent with the address of the main line except where the operator registry contains more reliable information provided by the customer.

¹ The allocation of a code to an operator does not imply that the latter is contributing to the E112 – DB. Specification of the E112-DB file layout

5.2.6 Geographic coordinates

Geographic Coordinates must be codified according to the WGS84 standard.

Format: FFDDMMSSddmmsssRR

Field	Meaning	Component
FF	Message format. Allows new formats to be created subsequently. <ul style="list-style-type: none">• Possible values: 10 to 99• At this stage: F=10	Format
DD	Degrees	Latitude
MM	Minutes	
SSS	<ul style="list-style-type: none">• Seconds – Two first digits• 10ths of second – Third digit	
dd	Degrees	Longitude
mm	Minutes	
sss	<ul style="list-style-type: none">• Seconds – Two first digits• 10ths of second – Third digit	
RR	<ul style="list-style-type: none">• Possible values: 00 to 99• At this stage RR = 0	Extent and Format of Uncertainty

5.2.7 Operation

The information file enables 4 different operations:

5.2.7.1 New telephone number

Where the record does not exist in the E112-DB.

The field *Operation* must be filled in with “n” and a full record must be sent.

5.2.7.2 Alteration of an existent telephone number

Where the record has already been inserted in the E112-DB but needs to be amended.

The field *Operation* must be filled in with “a” and a full record must be sent.

5.2.7.3 Removal of an existent telephone number

Where the record has been inserted in the E112-DB but must be removed.

The field *Operation* must be filled in with “e”, no full record is required.

The effective removal of a number from the E112-DB is carried out only after one of the following conditions has been met:

- Expiry of the three month-quarantine period
- A new valid registration application has been submitted for this number, by the same operator or otherwise

5.2.7.4 Listing of all records

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Allows an operator to list all its active records in the E112-DB.

The field *Operation* must be filled in with "I". To reconfirm this action and to avoid a full listing of records by mistake, the compulsory field Telephone number must in addition be filled in with the value "123456789".

Following this action, authorities responsible for emergency services must generate an Output file with all active records in the E112-DB for the operator concerned, in the format identical to the one the operator must submit to regenerate "its own" E112-DB. This file must be deposited in the Outbox folder, as is the case for the error and notice file.

6. Requirements for submission of data file

The following set of requirements must be ensured as regards the submission of data files:

- Authorities responsible for emergency services shall make arrangements for a server, where information files are to be deposited.
- In this server, each provider shall have an exclusive area to deposit its files (Inbox folder).
- The access to deposit areas shall be safeguarded by a User name and respective password, providers being allowed to change their password.
- Authorities responsible for emergency services shall inform each Operator individually of their IP address and respective access User name and Password.
- Connection to the server shall be carried out via FTP through a safe access method that allows data to be encrypted when submitted.
- In addition to the deposit area, each Provider shall be also assigned another area for the collection of replies (Outbox folder).

7. Description of error and notice file

Authorities responsible for emergency services shall implement a mechanism that allows errors and notices on files and information deposited by Providers to be reported. For this purpose, a "feedback" file shall be generated for each deposited data file.

The error and notice file, as is the case for the data file, shall be type CVS (comma separated value), format ISO/IEC 8859-1 (ANSI), and present a name that enables an easy correlation between the two files:

[Service]_[Name of operator]_[Date of submission of information]_[File identifier].csv

Example:

- Ok_112_OPERX_20070601_00001.csv → Empty file indicating the absence of errors or notices
- Nok_112_OPERX_20070601_00001.csv → File indicating the presence of errors or notices

7.1 Record design

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Header

Description	Maximum size	Comments
Service identification	X(7)	Ok_112 – absence of errors or notices Nok_112 – presence of errors or notices
Name of operator	X(8)	Operator code
Date of submission of information	X(8)	Format: yyyyymmdd
Identifier	X(5)	Single and sequential file identifier

Detail:

Description	Maximum size	Comments
Line	N(6)	Document line number to which the error/notice refers
Telephone number	N(9)	Telephone number to which the error/notice refers, if it can be established
Error code	X(3)	Error/notice code
Comments	X(254)	Blank field for comments (empty in general)

Footer:

Description	Maximum size	Comments
Total number of file records	N(10)	

Table of error code values:

Error code	Error description
00A	Error in the number of fields, received number of fields: xxx
01A	Incorrect length of the Telephone number field
01B	Incorrect length of the Main Line Telephone number field
01C	The Telephone number field does not include only digits
01D	The Main Line Telephone number field does not include only digits
02A	Unknown Operation xxx
03A	Telephone number field already registered by operator xxx
04A	Operation “n” may not be carried out as record already exists
05A	Operation “a” may not be carried out as record does not exist
05B	Operation “a” may not be carried out as record does not exist for this operator
06A	Operation “e” may not be carried out as record does not exist
06B	Operation “e” may not be carried out as record does not exist for this operator
07A	Address field without information
08A	Location field without information
09A	Post code field without information
10A	Post designation field without information
13A	Geographic coordinates filled in with a number of digits other than 18
13B	Geographic coordinates does not include only digits
13C	Invalid geographic coordinates
14A	Empty header
14B	Header with wrong number of fields
14C	Incomplete or incorrect header
14D	The name of operator in the header exceeds the maximum number of characters
14E	Unknown operator

14F	The name of operator in the header does not correspond to the name of operator in the file name
14G	Inexistent or invalid format of the date of submission of information in the header
14H	Inexistent or invalid format of the single and sequential file identifier in the header
15A	The number of records in the footer xxx does not correspond to the number of lines xxx
16A	The field Address exceeds the allowed number of characters
16C	The field Location exceeds the allowed number of characters
16D	The field Floor exceeds the allowed number of characters
16E	The field Building number exceeds the allowed number of characters
16F	The field Address Terms exceeds the allowed number of characters
16G	The field Apartment exceeds the allowed number of characters
16H	The field Building exceeds the allowed number of characters
17A	Out of sequence file unexpected (erased) number of order / date
17B	Out of sequence file, previous to the last one processed (erased)
17C	Size of file exceeds the maximum provided for (erased)
17D	File with unexpected name (erased)

Table of notice code values:

Notice code	Notice description
11A	Invalid post code (notice)
12A	Invalid combination post code / post designation (notice)

8. Description of Message File

Authorities responsible for emergency services shall implement a mechanism that allows messages on files and information deposited by Providers to be reported. This file includes data on attempts to insert telephone numbers (CLI) already registered by other operators in the E112-DB.

The message file, as is the case for the data file, shall be type CVS (comma separated value), format ISO/IEC 8859-1 (ANSI), and present a name that enables an easy correlation between the two files:

[Service]_[Name of operator]_[Date of submission of information]_[File identifier].csv

Example: CLI_112_OPERX_20070601_00001.csv

8.1. Record design

Header

Description	Maximum size	Comments
Service identification	X(7)	CLI_112 – presence of messages
Name of operator	X(8)	Operator code
Date of submission of information	X(8)	Format: yyyyymmdd
Identifier	X(5)	Single and sequential file identifier

Detail:

Description	Maximum size	Comments
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Telephone number	N(9)	Telephone number to which the error/notice refers, if it can be established
Error code	X(3)	Notice code
Comments	X(254)	Blank field for comments (empty in general)

Footer:

Description	Maximum size	Comments
Total number of file records	N(10)	

Table of notice code values:

Notice code	Notice description
18A	Another Operator attempted to insert this Telephone number