P Ř Í L O H A 4

(AKTUÁLNÍ VERZE IT DOKUMENTU APVTS)

SMLOUVY O
ZAJIŠTĚNÍ ÚČTOVÁNÍ CENY ZA SLUŽBU PŘÍSTUPU V PEVNÉM MÍSTĚ A CENY ZA DALŠÍ SLUŽBY

mezi společnostmi

O2 Czech Republic a.s.

a

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NP, CPS, WLR
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Inter-Operator Interface for NP & CPS & WLR

THIS DOCUMENT IS PREPARED BY:

Project team NP&CS of the Technical Committee of the APVTS and O2 Czech Republic a.s.

Inter-Operator interface for NP & CPS & WLR

Contents

1 INTRODUCTION

The purpose of the following document is to provide a set of specifications for Number Portability Carrier Pre-Selection, WholesaleLineRental (NP&CPS&WLR).

This document regards the technical details of the interface between operators to support NP&CPS&WLR order processing.

This document addresses the following subjects related to this technical interface:
- Format of the messages exchanged between operators
- The mechanisms which enables the exchange of the messages between operators

1.1 Background

There will be between 15 and 30 operators offering Carrier Selection (CS), Carrier Pre-Selection (CPS) and Number Portability (CP) services in the Czech Republic.
For CS and Carrier Pre-Selection (CPS), the service establishment is primarily a responsibility of the Access Provider (AP) operator with Significant Market Power (SMP), at the present time O2 Czech Republic a.s. For NP, WLR Service establishment process will affect all operators in accordance with the Telecommunications Law.

1.2 Document history

Date	Version	Change
29-05-02	1.0	Former Czech Telecom proposal of IT document changed into APVTS document
22-10-02	1.3	The final SOAP specification included. Document finalized.
11-02-03	1.4	Working version. Incorporated changes agreed during implementation
06-03-03	1.4-1 Draft	Working version. Incorporated comments of Project team NP&CS of the Technical Committee of the APVTS
18-03-03	1.4-2 Draft	Working version. References to the DIOP document were substituted by proper references to appropriate service standard
20-03-03	1.5 Draft	Some references to O2 removed. Minor changes in the wording
31-03-03	1.5	Operator IDs changed in examples to reflect real IDs
31-05-03	1.6	• Document restructured, common part for both NP and CPS messages created • Description of fault handling related to SOAP added • New rules for sequenceNr validation added

22-03-06	2.0	• The NP PROVIDE ORDER shall include a new parameter called a Loop reuse flag, which will be set true if this order is in conjunction with a local loop unbundling order (HasLLU= true, false) flag. • New HassLLU optional flag was added into DTD – NP Provide definiton • General requirement for the interface availability The interface of each individual operator shall be 95% available and reliable 24 hours / day • VLDT, FLAC – processing time frame was changed Between 20.00 and 8.59 for the file types 'Validate' and 'File acknowledge' O2 will send VLDT, FLAC between 20.00-8.00 • In the terms of exceptional situation (OHS upgrade, OHS drop out) FLAC can be sent immediately when problem is resolved, ie. FLAC time sent frame was changed to 24 hours anytime.
02-09-06	2.1	• OHS specification for the new PRE service (Preuctovani pausalu) added • CPS PROVIDE ORDER shall include a new parameter – (pre= true, false) • NEW ORDER SPECIFICATION for PRE orders added – preProvide message (PRE service further ORDER for already processed CPS) • NEW RESPONSE SPECIFIACTION for PRE service added – preActivated, preRejected • New PRE service XML message structure added into DTD
04-16-08	3.0	• OHS specification for the new WLR service • New WLR orders and response messages - XML structure added: • WLRProvide,WLRmodify,WLRterminate • WLR Accept,WLRReject,WLRcomplete • NEW DTD np_cps_wlr.dtd
05-01-08	3.1	• Final WLR Rejection Codes Update
12-12-13	3.9	• Final NP and WLR Rejection Codes Update
02-02-2015	3.10	• Reject Codes Revision and Actualisation

1.3 References

Ref	Title
[VPNPC]	- Výběr provozovatele nastavením předvolby čísel (APVTS a ČTÚ – listopad 2002). The Acronym VPNPC is used only in the scope of this document. - Referenční nabídka propojení společnosti O2 Czech Republic a.s.
[PC]	- Přenositelnost čísla (APVTS a ČTÚ – prosinec 2002) - OOP10- opatření opecné povahy popisující process přenesení čísla v platném znění - Referenční nabídka propojení společnosti O2 Czech Republic a.s.
[XML]	XML Specificatoin http://www.w3c.org/xml
[SOAP]	SOAP 1.1 Specification http://www.w3.org/TR/SOAP
[HTTP]	HTTP 1.1 Specification ftp://ftp.isi.edu/in-notes/rfc2616.txt
[SSL]	SSL Specification http://wp.netscape.com/security/techbriefs/ssl.html

1.4 Definitions

The term “order” and “service order” are used interchangeably throughout this document.

The following definitions will be used for CS and CPS:

CPS operator - The operator to which calls are routed per CPS subscription
CS operator - The operator to which calls are routed when a customer dials a CS access code
Access Provider - the operator providing access capabilities to the CPS/CS operator
Start of Business (SOB) – 9 a.m. on business days
Close of Business (COB) – 6 p.m. on business days

The following definitions will be used in regards to NP:

losing operator/network: the operator from which the number is being ported
recipient operator/network: the operator to whom the number is being or has been ported
donor operator/network: the operator originally assigned the ported number (i.e., the number range holder from which the number originally came).

The following definitions will be used in regards to WLR:

WLR operator – operator ordering WLR service by O2CZ
IOOH – OHS system at O2CZ side

2 INTERFACE ARCHITECTURE

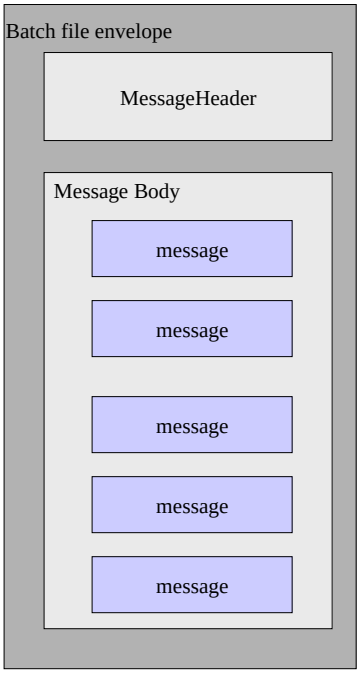
2.1 General requirements on the interface

The interface of each individual operator shall be 95% available and reliable 24 hours / day!!!

1) All orders shall be processed in the order in which they were received. (e.g., First in first out).
2) The data exchanged between two operators will be encrypted
3) Before two operators exchange data they will check authentication (username/password)
4) Each individual operator will take security measures, for example the usage of firewalls.
5) Each individual operator will log the events on the interface

2.2 Message structure

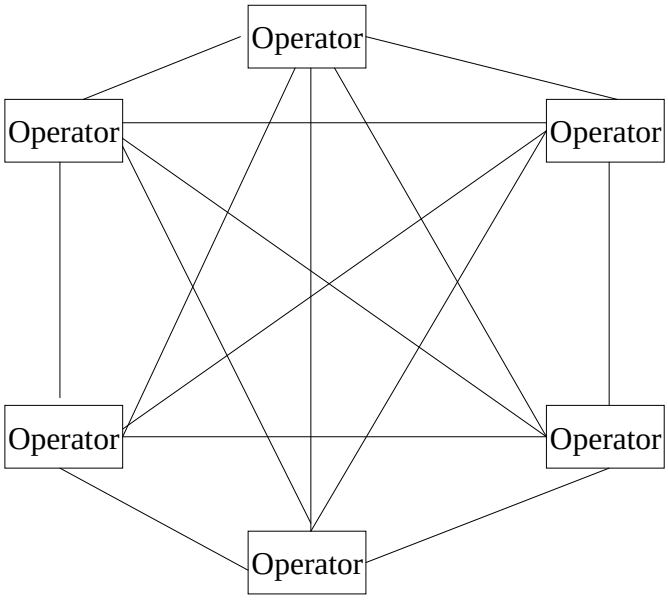
The messages exchanged between the operators are in fact flat files containing multiple messages.
A flat file consists of a valid XML document.



The files will be sent on fixed moments during the day. A flat file will contain all the orders related messages of that day.

2.3 Meshed architecture (NP) or star architecture (CPS)

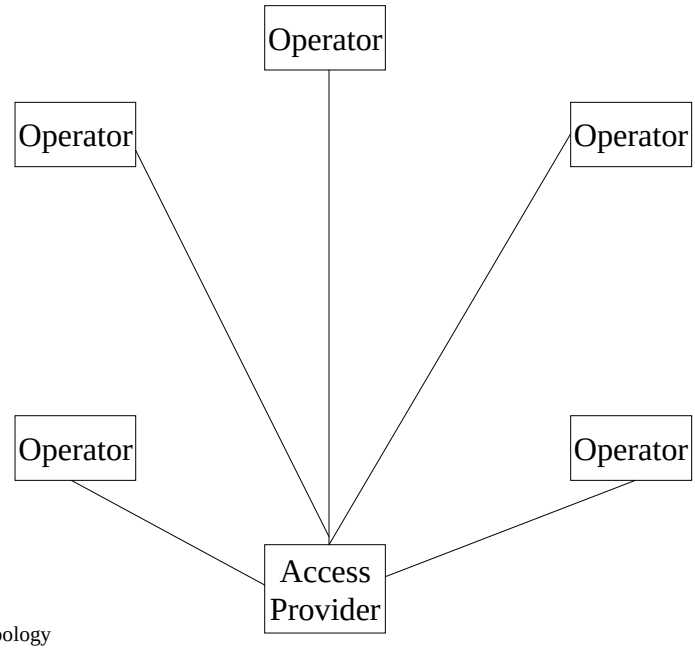
The different operators will be connected by a meshed architecture; every operator will have a connection to every other operator:



NP: Meshed Topology

In the case of Carrier Preselect only a CPS Access Provider will offer CPS services to their customers: each CPS operator is connected to that Access Provider.

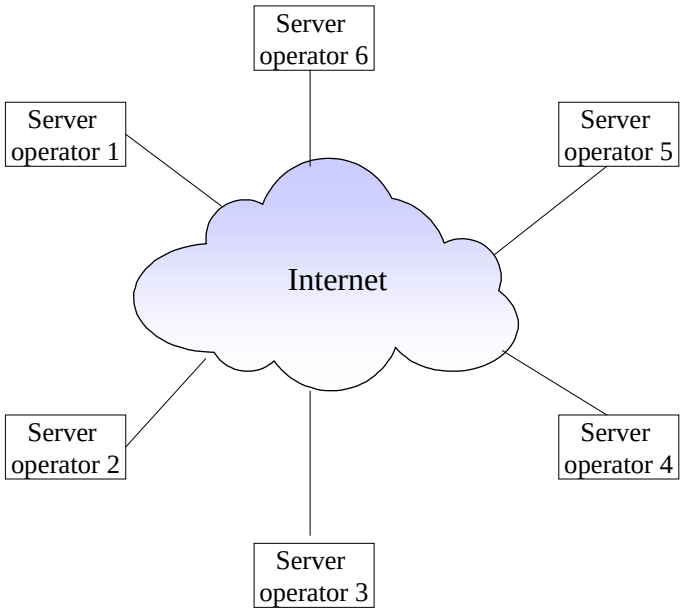
WLR service reflects star topology as CPS.



CPS: Star Topology

2.4 File exchange over the Internet

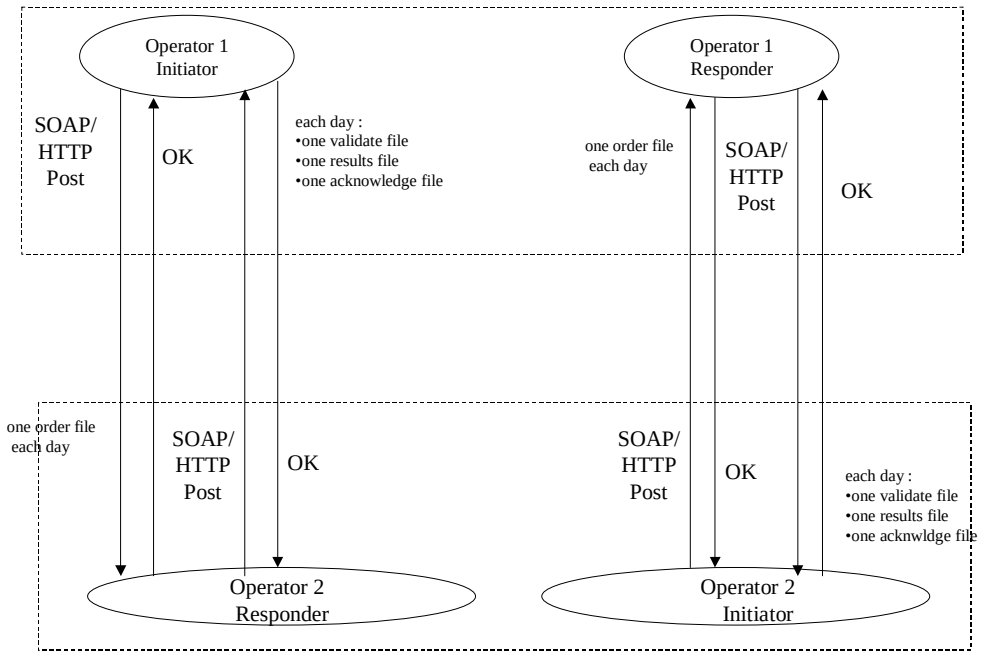
To enable the exchange of the files over the Internet every operator will have a HTTP-s server functionality (supporting SOAP 1.1) available for all other operators.



2.5 File exchange using HTTP-s

When an operator has a file to send to another operator he uses an HTTP request (POST) to the HTTP-s server of that other operator.
This operator will store the file internally, and acknowledge receiving the request.

Exchange of batch files between 2 operators



Principles:

- It is not required to send a file on a given day:

  If an operator 1 does not have any orders on a given day to send to operator 2, he will not send a file.
- Each received file will be acknowledged by a SOAP Response
  After an error occurred the initiator can send a new file (but before the deadline for this file type)

- The initiator (operator sending a file) must send a file (if applicable for that day) to the server of the responder (operator receiving a file) before a specified time on business days:
  - Before COB (= 18.00) for the file types 'ORDR' and 'RSLT'
  - Before SOB (= 9.00) for the file types 'VLDT' and 'FLAC'
  - In the terms of exceptional situation (OHS upgrade, OHS drop out) FLAC can be sent immediately when problem is resolved, ie. FLAC can be sent before COB and SOB ie. 24 hours a day .

  Processing will start after that time. Only one file of each type a day will be processed.

- The responder (operator receiving a file) must have the server for receiving files available on business days:
  - Between SOB (= 9.00) and COB (=18.00) for the file type 'Orders' and 'Result'
  After outage, in some cases described in appendix A, it must be possible to extend the COB from 18.00 to 19.00.

- Between 18.00 and 8.59 for the file types 'Validate' and 'File acknowledge'
O2 will send VLDT, FLAC between 19.00-9.00

- If a file cannot be delivered, because of outage of the server of the responder, the initiator will make 3 additional attempts to transfer the file. If also this retry fails a manual outage procedure will be used.
  The file will be delivered after the deadline (9.00 or 18.00).
- It is not possible to process more then one file of a file type from one initiator.
  If, more then one file of the same type is received from an initiator, only the last one will be processed.
  The other files are deleted: no fileAccept/ fileReject message will be send back!
- If there are multiple files received, but not yet processed, from an initiator with different dates (as a result of outage) the files will be accepted in the order they were received.

Example 1:
Operator 1 sends to operator 2 a new file every hour:

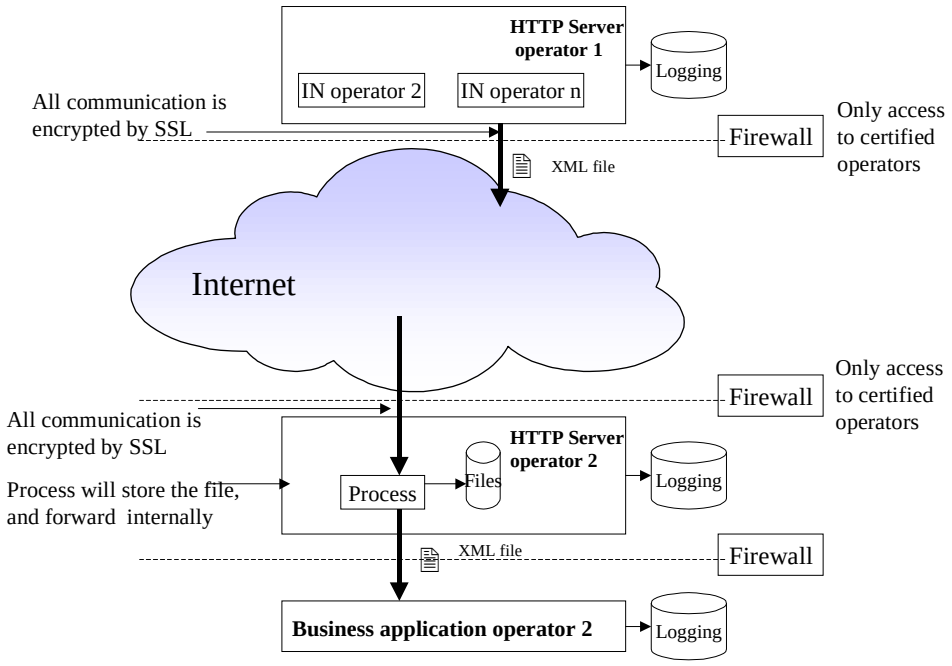
- file 1 at 12.00 with 30 orders
- file 2 at 13.00 with 40 orders (30 from file 1 + 10 new)
- file 3 at 14.00 with 50 orders (40 from file 2 + 10 new)
- file 4 at 15.00 with 60 orders (50 from file 3 + 10 new)
- file 5 at 16.00 with 70 orders (60 from file 4 + 10 new)

Each file transfer is successful (HTTP OK returned).
The file of 16.00 is processed.

Example 2:
Operator 1 sends to operator 2 a file of the type ‘orders’ at 15.00 and receives an HTTP acknowledgement (HTTP OK). At 16.00 a second file of the same type is sent, the transfer fails (HTTP error).
After 16.00 no new file is sent.
The first file, sent at 15.00, is processed.

Example 3
Operator 1 sends to operator 2 a file with 100 orders at 12.00.
At 14.00 he discovers that 20 orders are wrong, and 10 there are 10 new customer orders.
At 14.30 he sends a new file with 90 orders (80 excisting ones, 10 new).

2.6 Security



2.6.1 Security requirements

Access channel protection
The portal of each operator shall be protected by to limit the access to authorised operators.

Authentication
Before operators exchange order related messages their legitimacy should be established.

Authorization
An authenticated operator can only access the services that he is allowed to.

Confidentiality
Since the information contained in an order is confidential, it must be protected from unauthorized access by third parties.

Data integrity
Communications must be protected from undetectable alteration by third parties in transmission on the Internet.

Non repudiation
It should not be possible for an operator to reasonably claim that he or she did not send or receive an order. There must be sufficient evidence available of the transaction.

Audit trail
All communication between operators shall be registered in audit trail.

2.6.2 Security risks

1. **Sabotage by a hacker**
2. **Sabotage by an operator**
3. **Denial of a business transaction**
4. **Slamming with denial**

Damage:

Financial damage: loss of customer revenue.

Damage to customers: temporarily loss of the phone service

Image damage: hacking or large scale slamming damages the image of the industry

2.6.3 Security implementation

Requirement	Implementation	Security level
Access channel protection	Firewall	Sufficient
Authentication	User id/password, exchange encrypted using SSL + Secure server ID issued by Certification Authority	Sufficient
Authorization	HTTP Post only	Sufficient
Confidentiality	SSL encrypts transfer	Sufficient
Data integrity	SSL encrypts transfer	Sufficient
Non repudiation	Authentication, event logging, acknowledgement of file and order	Limited
Audit trail	event logging	Sufficient

2.6.4 On SSL

The Secure Socket Layer is a widely used standard from Netscape that secures web-based communication.
SSL is built in to virtually all web servers.

An independent Certification Authority must certify servers that support SSL.

To make mutual authentication possible also the clients must be authenticated.

2.6.5 Procedures

Next to the already described technical security measures, both “Výběr provozovatele nastavením předvolby čísel” and “Přenositelnost čísla” documents ([VPNPC] and [PC])) describe functional and procedural measures, which improve the security:

1) In the case of an NP order the customer must send a CAF to the loosing operator.
2) In the case of a CPS order the operator must afterwards be able to provide a CAF to Access Provider
3) Orders exchanged will be acknowledged (NP: by day 2, CPS: after service activation)

2.6.6 Additional procedure

To improve the Interface proposal on the 'Non repudiation' requirement an additional procedure (see appendix) is added on the handling of fraudulent orders

2.7 Interface Protocol Stack

Protocol stack

Industry standard	The industry in Czech Republic define standardised messages
XML	Message types structured into self describing format
Flat file	XML messages during the day are gathered in one flat file
SOAP/HTTP	Sending the flat file to the server of an operator
SSL	Making the connection secure (=HTTP-s)
TCP/IP	Correct delivery of the data
The Internet	Using the public internet

2.7.1 Industry standard

The Reference offer O2 agrees on a set of standardised messages and final process. This document defining only detail of IT communication.
Message types have been specified in the [VPNPC] and [PC] documents, these documents specify the structure of the following message types.

Message types defined:
- npProvide
- npAccept
- npReject
- npChange
- npCancel
- npAbort
- npPortComplete
- npReturnNumber
- npSubsequentPort

- npIDcheck
- npIDcheckResp
- cpsProvide
- cpsReject
- cpsActivated
- cpsAccept
- preProvide
- preActivated
- preRejected
- wlrProvide
- wlrModify
- wlrTerminate
- wlrAccept
- wlrReject
- wlrComplete

2.7.2 XML

This layer of the stack formats the defined message structures into a machine-readable structure: XML

Character set
In order to exchange special (Czech) characters correctly Unicode (UTF 8) will be used.

DTD's
The structure of the XML messages will be registered in DTD's.
DTD's of messages (the xxx.dtd files) will be stored locally, there is no centralised DTD server.

More information on XML can be found at: [XML]

2.7.3 Flat file

The individual XML messages are gathered into flat files, and sent at agreed time.

Flat file content
Each flat file is an XML message, consisting of:
- A message header
- one or more CPS/NP order messages (as described in the XML message layer)

Flat file message header specification

Item	Contents
To Operator	Code of the operator receiving this message
From Operator	Code of the operator originating this message
Flat file type	Code for flat file type: ORDR– provide VLDT - validate RSLT – result FLAC - File acknowledge
Message count	The number of messages contained in this file

TimeSent	Time this file was sent by originating operator
DateSent	Date this file was sent by originating operator

Chapter 3.2 contains the exact XML specification of the header, including the DTD.

Flat file types

Since specific message types cannot be combined in one flat file, four different batch file types have been defined:

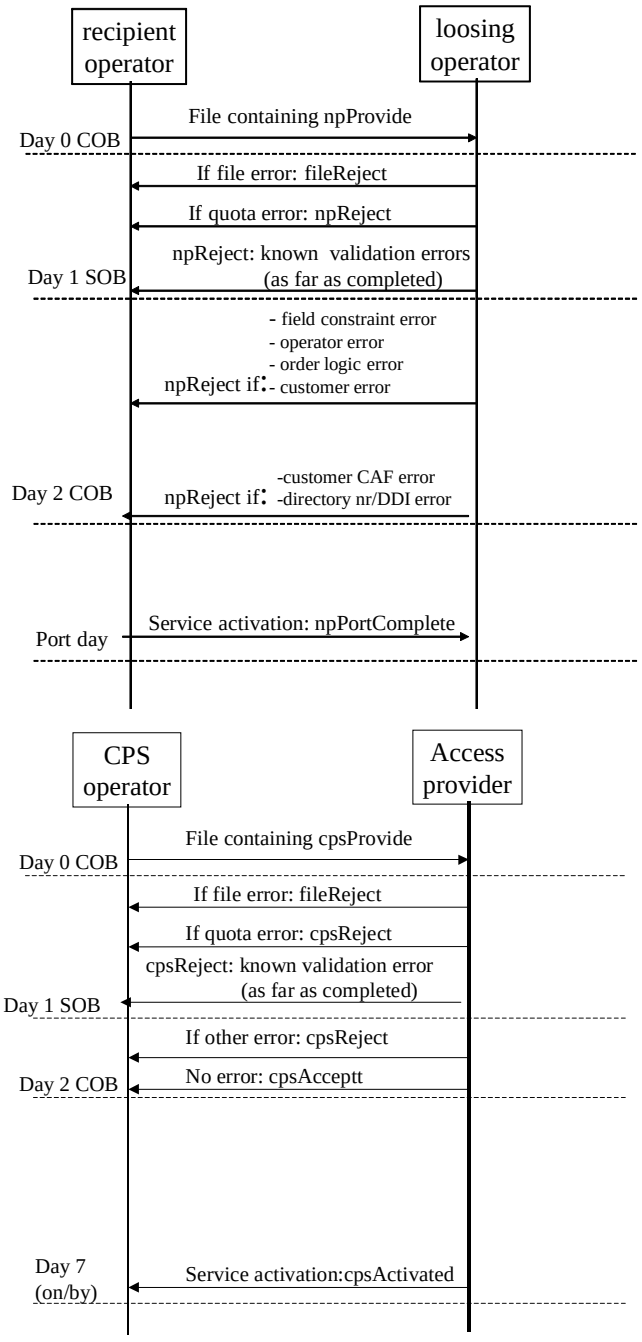
File type	Message types	Initiated by	Received before
Orders	npProvide npCancel npChange npSubsequenPort npPortComplete npReturnNumber npIDcheck (cpsProvide) (preProvide) /wlrProvide/ /wlrModify/ /wlrTerminate/	Recipient operator (CPS Operator) /WLR Operator/	COB (18.00), each business day
Validate	npReject npIDcheckResp (cpsReject) (preReject) /wlrAccept/ /wlrReject/ /wlrComplete/	Losing operator (Access Provider) /WLR Provider/	SOB (9.00), each business day
Result	npReject npIDcheckResp npAccept npAbort (cpsAccept) (cpsReject) (cpsActivated) (preActivated) /wlrAccept/ /wlrReject/ /wlrComplete/	Losing operator (Access Provider) /WLR Provider/	COB (18.00), each business day
File acknowledget	fileReject fileAccept	All	SOB (9.00), each business day

Note: the flat files can contain NP - CPS - WLR message types mixed.

The Validate file sent at 9.00 will contain quota rejections and rejections due to validation errors, however only those where order validation is completed before the submission of the file. Rejected orders processed after the submission of this file will be sent either by 18:00 on Day 1 or at the latest by 18:00 on Day 2.

Rejections as a result of technical investigation (Customer CAF, DDI, directory nr's) will be reported by proces specification descripted on Reference ofer O2

The following diagram illustrates the exchange of NP messages between two operators.



The following diagram illustrates the exchange of CPS messages between two operators.

Flat file reject/accept

If the whole flat file cannot be processed because of file errors (e.g. XML not well formed or XML not inline with DTD), a file of type FLAC will be sent back, including fileReject message for this file with the attribute refType containing the type of the file being refferenced (ORDR, RSLT or VLDT).
If the flat file does not contain any file errors and can be processed, a file of type FLAC will be sent back, including fileAccept message for this file with the attribute refType containing the type of the file being refferenced (ORDR, RSLT or VLDT).

2.7.4 SOAP and HTTP-s

Each operator will provide a basic SOAP/HTTP server (shall be HTTP 1.1 and SOAP 1.1 compatible) to which other operators can connect.
An operator that wants to send a file to another operator uses a SOAP request sent by HTTP POST, calling a specific web service on the other operator's server.

An operator that receives an HTTP post will check if the received file is complete (covered by SSL) and is stored.
The SOAP Response message is returned to confirm the transfer results.

The combination of HTTP and SSL makes the HTTP-s standard.

More information on HTTP 1.1 can be found at: [HTTP].
More information on SOAP 1.1 can be found at: [SOAP].

2.7.5 SSL

Secure Sockets Layer (SSL) is a protocol providing privacy and reliability between two communicating applications.
The session key length shall be 128 bits (much more secure then using 40-bit encrypted communication).

SSL consists of three properties:
- Private connection by using encryption
- Authentication of identity by using public, cryptography
- Reliable connection by using message integrity check

More information on SSL can be found at: [SSL]

2.7.6 TCP/IP

The Transmission Control Protocol (TCP) is intended for use as a highly reliable host-to-host protocol between hosts in packet-switched computer communication networks, and in interconnected systems of such networks.

2.7.7 Fault handling

In the file exchange process there are two basic types of faults that might occur:
- Error in the file delivery
    - These error types may be further decomposed into more categories of which the most important in this process are:

        - SOAP faults (see chapter 4.4 in [SOAP] for more details)
        - HTTP faults (see chapter 6.1.1 in [HTTP] for more details)
        - SSL errors – problems with certificates (see [SSL] for more details)
    - If this sort of an error occurs, the request has to be repeated.
- Errors in the batch file being passed to the other site
    - Also these errors can be divided into two main categories:
        - File errors
        - Order/Message errors
    - See Chapter 4 Error handling of this document for the complete specification

3 XML structure specification (order messages specification)

This chapter describes in detail the XML structure of the exchanged orders and other messages among operators within the ordering process. It's divided into 3 parts. First two of them provides definitions of the messages involved in NP ordering, CPS (PRE) messages description, WLR message description and the third and last one describes the constructions used within both NP and CPS ordering processes.

3.1 NP messages specification

3.1.1 npProvide

<npProvide>	
Description	Sent by the recipient operator to the losing operator to convey all initial details about an order.
Parent	Root
Syntax	<npProvide > <recipientOperator> <losingOperator> <serviceContractOwner> <installationAddress> <customerReferenceNumber> <icoNumber> <directoryNumber> <ddiRange> **<npIDinfo>** **<npIDattachment>** <portActivationDate> <portActivationTime> </npProvide >
Attributes	OrderNr SequenceNr NpServiceType ComplexOrder HasLLU
DTD Source	<!ELEMENT npProvide (recipientOperator, losingOperator, serviceContractOwner, installationAddress, customerReferenceNumber, icoNumber?, (directoryNumber+|ddiRange+), npIDinfo?, npIDattachment?, portActivationDate, portActivationTime)> <!ATTLIST npProvide orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED npServiceType (geog | non_geog) #REQUIRED complexOrder (yes | no) #REQUIRED hasLLU (true | false) #IMPLIED >

<npIDinfo>

Description	Info about npID: - NPID – číslo výpovědi u opouštěného operátora, předpokládáme strukurovanou textovou hodnotu - SPID_OUT – číslo poskytovatele služby u opouštěného operátora (předpokládáme trojmístné číslo) - SPID_IN – číslo poskytovatele služby u přijímajícího operátora (předpokládáme trojmístné číslo)
Parent	npProvide
Syntax	< npIDinfo > <npID> <spIDout> <spIDin> </npIDinfo >
DTD Source	<!ELEMENT npIDinfo (npID, spIDout?, spIDin?)> <!—Informace o NPID-->

<npIDattachment>	
Description	- Příloha – předpokládáme PDF nebo jiný podobný soubor, který bude pro potřeby XML zprávy zkonvertován v bytove podobe, v ramci konverze nebude ulozen nazev souboru, ten si pouzije kazdy operator podle sve vlastni potreby, zkonverovan bude pouze content.
Syntax	< npIDattachment > <attachment> </ npIDattachment >
DTD Source	<!ELEMENT npIDattachment (attachment)> <!--attachment-->

<attachment>	
Description	V tomto elementu bude primo dekodovany obsah pdf souboru zakodovana metodou base64
Syntax	< attachment > base64Binary datatype </ attachment >
DTD Source	<!ELEMENT attachment (#PCDATA) >

<npID>	
Description	OLO Code of losing operator
Parent	npIDinfo
Content	String datatype, alphanumeric, length = 20
Syntax	< npIDnumber > string datatype </ npIDnumber >
Validation	The npID string (formatted value) must be provided
DTD Source	<!ELEMENT npIDnumber (#PCDATA) #REQUIRED >

<spIDout>	
Description	OLO Code of new operator
Parent	npIDinfo
Content	String datatype, numeric, length = 3
Syntax	< spIDout > string datatype </ spIDout >
Validation	The npID string (formatted value) must be provided
DTD Source	<!ELEMENT spIDin (#PCDATA) >

<spIDin>	
Description	Description of validated NPID
Parent	npIDinfo
Content	String datatype, numeric, length = 3
Syntax	< spIDin > string datatype </ spIDin >
Validation	The npID string (formatted value) must be provided
DTD Source	<!ELEMENT spIDin (#PCDATA) >

<portActivationTime>	
Description	Time when the NP port should be activated
Syntax	<portActivationTime> <time> </portActivationTime>
DTD Source	<!ELEMENT portActivationTime (time)> <!--Cas aktivace portace-->

<portActivationDate>	
Description	Date when the NP port should be activated
Syntax	<portActivationDate> <date> </portActivationDate>
DTD Source	<!ELEMENT portActivationDate (date)> <!--Datum aktivace portace-->

<directoryNumber>	
Description	The telephone number to be ported
Content	String datatype, alphanumeric, length = 9

Syntax	<directoryNumber> string datatype </directoryNumber>
Validation	The complete (9 digit) line number must be provided
DTD Source	<!ELEMENT directoryNumber (#PCDATA)>

3.1.2 npAccept

<npAccept>		
Description	Sent by the losing operator to indicate positive validation and acceptance of the previous message	
Parent	Root	
Syntax	<npAccept > <recipientOperator> <losingOperator> </npAccept >	
Attributes	orderNr sequenceNr refSequenceNr	
DTD Source	<!ELEMENT npAccept <!ATTLIST npAccept <!--Akceptace NP-->	(recipientOperator, losingOperator)> orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED refSequenceNr CDATA #REQUIRED>

3.1.3 npReject

<npReject>		
Description	Sent by the operator to indicate rejection of the referenced message	
Parent	root	
Syntax	<npReject> <recipientOperator> <losingOperator> <rejectionCode> <rejectionDescription> <rejectionParameter> </npReject >	
Attributes	OrderNr SequenceNr RefSequenceNr	
DTD Source	<!ELEMENT npReject <!ATTLIST npReject	(recipientOperator , losingOperator, rejectionCode, rejectionDescription? , rejectionParameter*)> orderNr ID #REQUIRED

	sequenceNr CDATA #REQUIRED refSequenceNr CDATA #REQUIRED> <!--Odmitnuti NP -->

3.1.4 npChange

<npChange>	
Description	Sent by the recipient operator to change the porting date and/or time of an order
Parent	Root
Syntax	<npChange> <recipientOperator> <losingOperator> <newPortDate> <newPortTime> </npChange>
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npChange (recipientOperator , losingOperator , newPortDate , newPortTime)> <!ATTLIST npChange orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED> <!-- Zmena NP -->

<newPortTime>	
Description	Request for new port time that is different from the original accepted port time
Syntax	<newPortTime> <time> </newPortTime>
DTD Source	<!ELEMENT newPortTime (time)> <!—Novy cas portace-->

<newPortDate>	
Description	Request for new port date, can be the same as original accepted port date if only the time changes..
Syntax	<newPortDate> <date> </newPortDate>
DTD Source	<!ELEMENT newPortDate (date)> <!--Nove datum portace-->

3.1.5 npCancel

<npCancel>	
Description	Sent by the recipient operator to cancel an order (e.g., PROVIDE)
Parent	root
Syntax	<npCancel> <recipientOperator> <losingOperator> </npCancel >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npCancel (recipientOperator, losingOperator)> <!ATTLIST npCancel orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED> <!-- Zruseni NP-->

3.1.6 npAbort

<npAbort>	
Description	Sent by the losing operator under certain exception processing conditions
Parent	root
Syntax	<npAbort> <recipientOperator> <losingOperator> </npAbort >
Attributes	orderNr sequenceNr
DTD Source	<!ELEMENT npAbort (recipientOperator, losingOperator)> <!ATTLIST npAbort orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> <!-- Storno NP -->

3.1.7 npPortComplete

<npPortComplete>	
Description	Message send from recipient operator indicating the successful completion of the number port.
Parent	root
Syntax	<npPortComplete> <recipientOperator> <losingOperator>

	</npPortComplete >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npPortComplete (recipientOperator, losingOperator)> <!ATTLIST npPortComplete orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED> <!--Portace cisla NP dokoncena-->

3.1.8 npReturnNumber

<npReturnNumber>	
Description	Sent by the recipient operator to return a number to the donor operator following cessation of a number by a customer Note: An npAccept or an npReject message to the npReturnNumber shall contain the donorOperator information within the losingOperator field.
Parent	root
Syntax	<npReturnNumber> <recipientOperator> <donorOperator> <directoryNumber> <ddiRange> <serviceDisconnectionDate> <serviceDisconnectionTime> </npReturnNumber >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npReturnNumber (recipientOperator , donorOperator , (directoryNumber | ddiRange), serviceDisconnectionDate , serviceDisconnectionTime)> <!ATTLIST npReturnNumber orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED> <!--Vraceni cisla-->

<serviceDisconnectionTime>	
Description	Time when directory number was taken out of service.
Syntax	<serviceDisconnectionTime> <time> </serviceDisconnectionTime>
DTD Source	<!ELEMENT serviceDisconnectionTime (time)> <!--Cas vypojeni sluzby-->

<serviceDisconnectionDate>	
Description	Date when directory number was taken out of service

Syntax	<serviceDisconnectionDate> <date> </serviceDisconnectionDate>
DTD Source	<!ELEMENT serviceDisconnectionDate (date)> <!--Datum vypojeni sluzby-->

3.1.9 npSubsequentPort

<npSubsequentPort>	
Description	Sent by the recipient operator to the donor operator to indicate a change in number ownership Note: An npAccept or an npReject message to the npSubsequentPort shall contain the donorOperator information within the losingOperator field.
Parent	root
Syntax	<npSubsequentPort> <recipientOperator> <donorOperator> <losingOperator> <directoryNumber> <ddiRange> </npSubsequentPort >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npSubsequentPort (recipientOperator, donorOperator , losingOperator , (directoryNumber | ddiRange))> <!ATTLIST npSubsequentPort orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> <!--Nasledna portace NP-->

3.1.10 npIDcheck

<npIDcheck>	
Description	Sent by the recipient operator to the donor operator to validate combination of npID and phone number is correct
Parent	root
Syntax	<npIDcheck> <recipientOperator> <losingOperator> <npIDnumber> <directoryNumber> </ npIDcheck >
Attributes	OrderNr SequenceNr

DTD Source	<!ELEMENT npIDcheck (recipientOperator, losingOperator , npIDnumber, directoryNumber)> <!ATTLIST npIDcheck orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> <!—kontrola spravnosti npID-->

<npIDnumber>	
Description	Description of validated NPID – also knowns as “ČVOP – číslo výpovědi opouštěného poskytovatele”
Parent	npIDcheck
Content	String datatype, alphanumeric, length = 20
Syntax	< npIDnumber > string datatype </ npIDnumber >
Validation	The npID string (formatted value) must be provided
DTD Source	<!ELEMENT npIDnumber (#PCDATA) #REQUIRED >

3.1.11 npIDcheckResp

<npIDcheckResp>	
Description	Sent by the donor operator to the recipient operator as response to npIDcheck Info from npIDcheck (npIDnumber, directoryNumber) are repetaed and key info about validation is in tag npIDcorrect
Parent	root
Syntax	<npIDcheckResp> <recipientOperator> <losingOperator> < npIDnumber > <directoryNumber> <npIDcorrect> </ npIDcheckResp >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT npIDcheckResp (recipientOperator, losingOperator , npIDnumber, directoryNumber, npIDcorrect)> <!ATTLIST npIDcheckResp orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> <!—odpoved, zda je komibnace npID a telefonu korektni-->

<npIDcorect>	
Description	npID – result of validation
Parent	npIDcheckResp
Content	String datatype, alphanumeric, length = 1
Syntax	< npIDcorrect > string datatype

	</ npIDcorrect >
Validation	The npIDcorrect string(Y = correct, N = incorrect) must be provided
DTD Source	<!ELEMENT npIDcorrect (#PCDATA) > <!ATTLIST npIDcorrect resp (Y|N) #REQUIRED>

3.1.12 recipientOperator, losingOperator, donorOperator

<recipientOperator>	
Description	Unique identification code specific to the recipient Operator
Parent	<npProvide> <npAccept> <npReject> <npChange> <npCancel> <npPortComplete> <npReturnNumber> <npSubsequentPort>
Syntax	<recipientOperator> <operatorID> </recipientOperator >
DTD Source	<!ELEMENT recipientOperator (operatorID)> <!—Prejimajici operator-->

<losingOperator>	
Description	Unique identification code specific to the losing Operator
Parent	<npProvide> <npAccept> <npReject> <npChange> <npCancel> <npPortComplete>
Syntax	<losingOperator> <operatorID> </losingOperator>
Field requirements	Operator receiving this message is the losing operator
DTD Source	<!ELEMENT losingOperator (operatorID)> <!--Predavajici operator -->

<donorOperator>	
Description	Unique identification code specific to the donor Operator
Content	Element only
Parent	<npReturnNumber> <npSubsequentPort>
Syntax	<donorOperator> <operatorID>

	</donorOperator>
DTD Source	<!ELEMENT donorOperator (operatorID)> <!--Puvodni operator -->

3.1.13 DDI range

<ddiRange>	
Description	Number block range The block size of a DDI can be either 10, 100, 1000, 10000 or 100000. Appendix C describes the principles of DDI numbering.
Parent	<npProvide>
Syntax	<ddiRange > <ddiRangeStart> <ddiRangeEnd> </ddiRange >
Attributes	None
Message constraints	<ddiRangeStart> is smaller then <ddiRangeEnd>
DTD Source	<!ELEMENT ddiRange (ddiRangeStart, ddiRangeEnd)> <!--Rozsah provolby-->

<ddiRangeStart>	
Description	Start of a number block range.
Content	String datatype, alphanumeric, length = 9
Parent	<ddiRange>
Syntax	<ddiRangStart> string datatype </ddiRangeStart>
Field requirements	The <ddiRangeStart> always ends with 1 or more zero's Example: if block size is 100 the <ddiRangeStart> is xxxxxxx00
DTD Source	<!ELEMENT ddiRangeStart(#PCDATA)> <!--Rozsah provolby – zacatek-->

<ddiRangeEnd>	
Description	End of a number block range.
Content	String datatype, alphanumeric, length = = 9
Parent	<ddiRange>
Syntax	<ddiRangEnd> string datatype

	</ddiRangeEnd>
Field requirements	The <ddiRangeEnds> always ends with 1 or more nine's Example: if block size is 100 the <ddiRangeEnd> is xxxxxxx99
DTD Source	<!ELEMENT ddiRangeEnd(#PCDATA)> <!--Rozsah provolby – konec -->

3.1.14 NP Message attributes specification

npServiceType	
Description	Indicates the type of Number portability: Geographical or Non-Geographical Typ sluzby np
Content	Possible values: - geog - non_geog
Attribute spec	npServiceType (geog | non_geog) #REQUIRED

3.2 CPS (PRE) messages specification

3.2.1 cpsProvide

<cpsProvide>	
Description	Sent by the CPS operator to the Access Provider to convey all initial details about an order
Parent	root
Syntax	<cpsProvide> <cpsOperator> <cscCode> <serviceContractOwner> <installationAddress> <customerReferenceNumber> <icoNumber> <callingLineID> </cpsProvide >
Attributes	OrderNr SequenceNr CpsServiceType ComplexOrder pre
DTD Source	<!ELEMENT cpsProvide (cpsOperator , cscCode , serviceContractOwner , installationAddress , customerReferenceNumber, icoNumber?, callingLineID)> <!ATTLIST cpsProvide orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED cpsServiceType (nat | intl | both) pre (true | false) #IMPLIED #REQUIRED complexOrder (yes | no) #REQUIRED>

<callingLineID>	
Description	CLI for which CPS will be used.
Content	String datatype, alphanumeric, min length = 4, max length = 9
Syntax	<callingLineID> string datatype </callingLineID>
Validation	This field contains either the complete (9 digit) line number or the DDI Prefix (4 to 8 digits). See appendix C for a description of the use of DDI prefix.
DTD Source	<!ELEMENT callingLineID (#PCDATA)> <!—Identifikator volajici linky-->

<cscCode>	
Description	Csc Code is the prefix to be used for CPS for this customer
Content	String datatype, numeric, min. length = 4, max. length = 5
Syntax	<cscCode> string datatype </cscCode>
Validation	The CSC code is a 4 or 5 digit code.
DTD Source	<!ELEMENT cscCode (#PCDATA)> <!--Identifikacni kod operatora-->

3.2.2 preProvide

<cpsProvide>		
Description	Sent by the CPS operator as a further order to activate PRE service for the customer which already has CPS service activated	
Parent	root	
Syntax	<preProvide> <cpsOperator> <cscCode> <serviceContractOwner> <installationAddress> <customerReferenceNumber> <icoNumber> <callingLineID> </preProvide >	
Attributes	OrderNr – (note! new OrderNr, not related to past CPS order) SequenceNr (note! new SequenceNr, not related to past CPS order) CpsServiceType ComplexOrder	
DTD Source	<!ELEMENT preProvide <!ATTLIST cpsProvide #REQUIRED	(cpsOperator , cscCode , serviceContractOwner , installationAddress , customerReferenceNumber, icoNumber?, callingLineID)> orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED cpsServiceType (nat | intl | both) PRE (true | false) #IMPLIED complexOrder (yes | no) #REQUIRED>

<callingLineID>	
Description	CLI for which PRE service will be activated.
Content	String datatype, alphanumeric, min length = 4, max length = 9
Syntax	<callingLineID> string datatype </callingLineID>
Validation	This field contains either the complete (9 digit) line number or the DDI Prefix (4 to 8 digits). See appendix C for a description of the use of DDI prefix.
DTD Source	<!ELEMENT callingLineID (#PCDATA)> <!—Identifikator volajici linky-->

<cscCode>	
Description	Csc Code is the prefix to be used for CPS for this customer
Content	String datatype, numeric, min. length = 4, max. length = 5
Syntax	<cscCode> string datatype </cscCode>
Validation	The CSC code is a 4 or 5 digit code.
DTD Source	<!ELEMENT cscCode (#PCDATA)> <!--Identifikacni kod operatora-->

3.2.3 cpsReject

<cpsReject>		
Description	Sent by the Access Provider used to indicate rejection of the referenced message	
Parent	Root	
Syntax	<cpsReject> <cpsOperator> <rejectionCode> <rejectionDescription> <rejectionParameter> </cpsReject >	
Attributes	OrderNumber SequenceNumber RefSequenceNumber	
DTD Source	<!ELEMENT cpsReject <!ATTLIST cpsReject <!--Odmitnuti CPS-->	(cpsOperator, rejectionCode, rejectionDescription?, rejectionParameter*)> orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED refSequenceNr CDATA #REQUIRED>

3.2.4 cpsAccept

<cpsAccept>		
Description	Sent by the losing operator to indicate positive validation and acceptance of the previous message	
Parent	Root	
Syntax	<cpsAccept > <cpsOperator> </cpsAccept >	
Attributes	orderNr sequenceNr refSequenceNr	
DTD Source	<!ELEMENT cpsAccept <!ATTLIST cpsAccept <!--Akceptace CPS-->	(cpsOperator)> orderNr ID #REQUIRED sequenceNr CDATA #REQUIRED refSequenceNr CDATA #REQUIRED>

3.2.5 cpsActivated

<cpsActivated>	
Description	Sent by the Access Provider to indicate order has been activated
Parent	Root
Syntax	<cpsActivated> <cpsOperator> <callingLineID> </cpsActivated>
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT cpsActivated (cpsOperator, callingLineID)> <!ATTLIST cpsActivated orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED>

3.2.6 preReject

<cpsReject>	
Description	Sent by the Access Provider used to indicate rejection of the referenced message
Parent	Root
Syntax	<preReject> <cpsOperator> <rejectionCode> <rejectionDescription> <rejectionParameter> </preReject >
Attributes	OrderNumber SequenceNumber RefSequenceNumber
DTD Source	<!ELEMENT cpsReject (cpsOperator, rejectionCode, rejectionDescription?, rejectionParameter*)> <!ATTLIST cpsReject orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED refSequenceNr CDATA #REQUIRED> <!--Odmitnuti PRE-->

3.2.7 preActivated

<cpsActivated>	
Description	Sent by the Access Provider to indicate PRE service has been activated
Parent	Root
Syntax	<preActivated> <cpsOperator> <callingLineID> </preActivated>
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT preActivated (cpsOperator, callingLineID)> <!ATTLIST preActivated orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED>

3.2.8 cpsOperator

<cpsOperator>	
Description	Unique identification code specific to the CPS Operator
Content	Element only
Parent	<cpsProvide> <cpsReject> <cpsActivated>
Syntax	<cpsOperator> <operatorID> </cpsOperator>
DTD Source	<!ELEMENT cpsOperator (operatorID)> <!—Operátor CPS -->

3.2.9 CPS Message attributes specification

cpsServiceType	
Description	Indicates the type of Carrier Preselect: National, International or both Typ sluzby CPS
Content	Possible values: - nat - intl - both

3.3 WLR messages specification

3.3.1 wlrProvide

<wlrProvide>	
Description	WLR Provide (wlrProvide) is an order for Wholesale Line Rental WLR Provide is initiated by the OLO
Parent	Root – sent in ORDR FILE
Syntax	<wlrProvide orderNr="W00000011" sequenceNr="1"> <wlrOperator> <operatorID>999</operatorID> </wlrOperator> <customerReferenceNumber>0123456789</customerReferenceNumber> <callingLineID>234234234</callingLineID> <serviceContractOwner> <installationAddress> <icoNumber> <tariff>provolba</tariff> <ProductList> <Product> <ProductCode>OP0009</ProductCode> <Attribut_name>Typ</Attribut_name> <Attribut_value>Pravidelný</Attribut_value> </Product> <Product> <ProductCode>OP0010</ProductCode> </Product> <Product> <ProductCode>DS0003</ProductCode> </Product> </ ProductList> </wlrProvide >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT wlrProvide OperatorID #REQUIRED CustomerReferenceNumber #REQUIRED CallingLindeID #REQUIRED serviceContractOwner #REQUIRED installationAddress #REQUIRED icoNumber #REQUIRED tariff #REQUIRED productlist # REQUIRED <!ATTLIST wlrProvide orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED>

3.3.2 wlrModify

<wlrModify>	
Description	WLR Modify (wlrModify) is WLR order which change current WLR service for given customer on O2 side. WLR Modify is an independend order with own orderNr
Parent	Root – sent in ORDR FILE

Syntax	< wlrModify orderNr="W00000011" sequenceNr="1"> <wlrOperator> <operatorID>999</operatorID> </wlrOperator> <customerReferenceNumber>0123456789</customerReferenceNumber> <callingLineID>234234234</callingLineID> <serviceContractOwner> <installationAddress> <icoNumber> <tariff>provolba</tariff> <ProductList> <Product> <ProductCode>OP0009</ProductCode> <Attribut_name>Typ</Attribut_name> <Attribut_value>Pravidelný</Attribut_value> </Product> <Product> <ProductCode>OP0010</ProductCode> </Product> <Product> <ProductCode>DS0003</ProductCode> </Product> </ ProductList> </wlrModify >
Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT wlrModify OperatorID #REQUIRED CustomerReferenceNumber #REQUIRED CallingLindeID #REQUIRED serviceContractOwner #REQUIRED installationAddress #REQUIRED icoNumber # REQUIRED tariff #REQUIRED productlist # REQUIRED <!ATTLIST wlrModify orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED>

3.3.3 wlrTerminate

<wlrTerminate>	
Description	WLR Terminate (wlrTerminate) terminates activated WLR services on O2 side WLR Terminate is an independend order with own orderNr WLR Terminate is initiated by the OLO.
Parent	Root – sent in ORDR FILE
Syntax	<wlrTerminate orderNr="W00000011" sequenceNr="2"> <wlrOperator> <operatorID>999</operatorID> </wlrOperator> <customerReferenceNumber>0123456789</customerReferenceNumber> <callingLineID>234234234</callingLineID> <serviceContractOwner> <installationAddress> <icoNumber> </wlrTerminate>

Attributes	OrderNr SequenceNr
DTD Source	<!ELEMENT wlrTerminate OperatorID #REQUIRED CustomerReferenceNumber #REQUIRED CallingLindeID #REQUIRED serviceContractOwner #REQUIRED installationAddress #REQUIRED icoNumber # REQUIRED <!ATTLIST wlrTerminate orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED>

Response messages to wlrProvide , wlrModify, wlrTerminate orders:

3.3.4 wlrReject

<wlrReject>	
Description	WLR Reject (wlrReject) is a rejection to processed WLR Provide. WLR Reject is initiated by the IOOH.
Parent	root sent in RSLT or VLDT file
Syntax	<wlrReject orderNr="W00000003" sequenceNr="1" refSequenceNr="1"> <wlrOperator> <operatorID>212</operatorID> </wlrOperator> <rejectionCode>W007</rejectionCode> <rejectionDescription>wlrProvide received too late</rejectionDescription> </wlrReject>
Attributes	OrderNr SequenceNr refSequnceNr
DTD Source	<!ELEMENT wlrReject OperatorID #REQUIRED RejectionCode #REQUIRED RejectionDescription #REQUIRED <!ATTLIST wlrReject orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> refSequenceNr CDATA #REQUIRED>

3.3.5 wlrAccept

<wlrAccept>	
Description	WLR Accept (wlrAccept) is an accept to processed WLR Provide. WLR Accept is initiated by the IOOH.
Parent	root sent in RSLT file

Syntax	<wlrAccept orderNr="W00000012" sequenceNr="1" refSequenceNr="1"> <wlrOperator> <operatorID>212</operatorID> </wlrOperator> </wlrAccept>
Attributes	OrderNr SequenceNr refSequnceNr
DTD Source	<!ELEMENT wlrAccept OperatorID #REQUIRED <!ATTLIST wlrAccept orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> refSequenceNr CDATA #REQUIRED>

3.3.6 wlrComplete

<wlrComplete>	
Description	WLR complete (wlrComplete) is message confirming successful WLR service activation/modification/termination on O2 side. WLR complete is initiated by the IOOH. .
Parent	root sent in RSLT file
Syntax	<wlrComplete orderNr="W00000012" sequenceNr="2" refSequenceNr="1"> <wlrOperator> <operatorID>212</operatorID> </wlrOperator> <callingLineID>234234234</callingLineID> <CompleteDate> <date>2003-05-09</date> </CompleteDate> <CompleteTime> <time>10:00:00</time> </CompleteTime> </wlrComplete >
Attributes	OrderNr SequenceNr refSequnceNr
DTD Source	<!ELEMENT wlrComplete OperatorID #REQUIRED callingLineID #REQUIRED CompleteDate #REQUIRED CompleteTime #REQUIRED <!ATTLIST wlrComplete orderNr CDATA #REQUIRED sequenceNr CDATA #REQUIRED> refSequenceNr CDATA #REQUIRED>

3.4 Common messages specification

3.4.1 header

<header>	
Description	Provides information on the routing, handling and processing of this flat file.
Parent	Root

Syntax	<header> <toOperator> <fromOperator> <fileType> <messagecount> <timeSent> <dateSent> </header>
Attributes	None
Message constraints	None
DTD Source	<!ELEMENT header (toOperator, fromOperator, fileType, messagecount timeSent, dateSent)>

<toOperator>	
Description	Unique identification code of the operator receiving this flat file
Content	Element only
Syntax	<toOperator> <operatorID> </toOperator>
Attributes	None
DTD Source	<!ELEMENT toOperator (operatorID)>

<fromOperator>	
Description	Unique identification code of the operator originating this flat file
Content	Element only
Syntax	<fromOperator> <operatorID> <fromOperator>
Attributes	None
DTD Source	<!ELEMENT fromOperator (operatorID)>

<fileType>	
Description	Code for flat file type
Content	string datatype, alphanumeric, length = 4 possible values: ORDR– provide VLDT - validate RSLT – result FLAC - File acknowledge
Syntax	<fileType> string datatype <fileType>
Attributes	None
DTD Source	<!ELEMENT fileType (#PCDATA)>

<messageCount>	
Description	Shows the number of messages in this file
Content	string datatype, numeric, length = 4, leading zero’s
Syntax	<messageCount> string datatype </messageCount>

Attributes	None
DTD Source	<!ELEMENT messageCount(#PCDATA)>

<timeSent>	
Description	Time this flat file was sent by originating operator If an operator sends a second file during the day this MUST have a different <timeSent> !!
Content	Element only
Syntax	<timeSent> <time> </timeSent>
DTD Source	<!ELEMENT timeSent (time)>

<dateSent>	
Description	Date this flat file was sent by originating operator
Content	Element only
Syntax	<dateSent> <date> </dateSent>
DTD Source	<!ELEMENT dateSent (date)>

3.4.2 fileReject

<fileReject>	
Description	Sent by an operator to indicate rejection of the referenced file
Parent	root
Syntax	<fileReject> <refTimeSent> <refDateSent> <rejectionCode> <rejectionDescription> </fileReject >
Attributes	None
DTD Source	<!ELEMENT fileReject (refTimeSent, refDateSent, rejectionCode, rejectionDescription)>

3.4.3 fileAccept

<fileAccept>	
Description	Sent by an operator to indicate acceptation of the referenced file

Parent	root
Syntax	<fileAccept> <refTimeSent> <refDateSent> </fileAccept >
Attributes	None
DTD Source	<!ELEMENT fileAccept (refTimeSent, refDateSent)>

<refTimeSent>	
Description	Refers to <timeSent> of the rejected/accepted flat file
Content	Element only
Syntax	<refTimeSent> <time> </refTimeSent>
DTD Source	<!ELEMENT refTimeSent (time)>

<refDateSent>	
Description	Refers to <dateSent> of the rejected/accepted flat file
Content	Element only
Syntax	<refDateSent> <date> </refDateSent>
DTD Source	<!ELEMENT refDateSent (date)>

3.4.4 serviceContractOwner

<serviceContractOwner>	
Description	Contains the basic information on the owner of this contract
Parent	<npProvide>, <cpsProvide>,<wlrProvide>
Syntax	<serviceContractOwner> <ownerSurname> <ownerFirstName> <ownerCompanyName> </serviceContractOwner >
Attributes	None
DTD Source	<!ELEMENT serviceContractOwner ((ownerSurname, ownerFirstName) | ownerCompanyName)> <!--Vlastnik kontraktu na sluzbu-->

<ownerSurname>	
Description	Surname of Contract Owner or name on CAF
Content	String datatype, alphanumeric, min length = 1, max length = 110
Parent	<serviceContractOwner>
Syntax	<ownerSurname> string datatype </ownerSurname >
Attributes	None
DTD Source	<!ELEMENT ownerSurname (#PCDATA)> <!--Prijmeni vlastnika-->

<ownerFirstname>	
Description	Firstname of Contract Owner or name on CAF
Content	String datatype, alphanumeric, min length = 1, max length = 32
Parent	<serviceContractOwner>
Syntax	<ownerFirstname> string datatype </ownerFirstname >
Attributes	None
DTD Source	<!ELEMENT ownerFirstName (#PCDATA)> <!--Krestni jmeno vlastnika-->

<ownerCompanyname>	
Description	Company name of Contract Owner or name on CAF
Content	String datatype, alphanumeric, min length = 1, max length = 32
Parent	<serviceContractOwner>
Syntax	<ownerCompanyname> string datatype </ownerCompanyname >
Attributes	None
DTD Source	<!ELEMENT ownerCompanyName(#PCDATA)> <!--Nazev organizace-->

3.4.5 installationAddress

<installationAddress>	
Description	Contains the basic information on the installation address See appendix for references on addressing standards
Parent	<npProvide>, <cpsProvide>,<wlrProvide>
Syntax	<installationAddress>

	<houseNumberA> <houseNumberB> <streetName> <city> <ciySection> <district> <postCode> </installationAddress >
Attributes	None
Constraints	Either the A or B house number is required. Both are allowed. postcode is manadatory for NP only
DTD Source	<!ELEMENT installationAddress (((housenumberA, housenumberB) | housenumberA | housenumberB), streetName, city, citySection?, district, postCode?)> <!--Adresa instalace--> Note: The construction ((housenumberA, housenumberB) | housenumberA | housenumberB) is not a deterministic model.

<housenumberA>	
Description	House/Residence number (e.g., 5) This is the number of the house within the street, the blue housenumber.
Content	String datatype, alphanumeric, min length = 1, max length = 5
Syntax	<housenumberA> string datatype </housenumberA>
DTD Source	<!ELEMENT housenumberA (#PCDATA)> <!-- Cislo popisne mista instalace -->

<housenumberB>	
Description	This is the location orientation number, the number that appears on the red plate. Cislo orientacni adresy umisteni pripojeni.
Content	String datatype, alphanumeric, min length = 1, max length = 8
Syntax	<housenumberB> string datatype </housenumberB>
DTD Source	<!ELEMENT housenumberB (#PCDATA)> <!--Cislo orientacni mista instalace-->

<streetName>	
Description	Name of the street the address is situated in (e.g, Francouzska)
Content	String datatype, alphanumeric, min length = 1, max length = 64
Syntax	<streetName> string datatype </streetName>
DTD Source	<!ELEMENT streetName (#PCDATA)>

	<!-- Nazev ulice mista instalace -->

<city>	
Description	Name of the city where the address is situated in (e.g, Praha)
Content	String datatype, alphanumeric, min length = 1, max length = 64
Syntax	<city> string datatype </city>
DTD Source	<!ELEMENT city (#PCDATA)> <!-- Obec instalace -->

<citySection>	
Description	Name of the part of the city where the address is situated in (e.g, Praha 2)
Content	String datatype, alphanumeric, min length = 1, max length = 64
Syntax	<citySection> string datatype </citySection>
DTD Source	<!ELEMENT citySection(#PCDATA)> < !-- Obec instalace -->

<district>	
Description	Name of the location district where the address is situated
Content	String datatype, alphanumeric, min length = 1, max length = 64
Syntax	<district> string datatype </district>
DTD Source	<!ELEMENT district (#PCDATA)> <!--Uctovaci oblast-->

<postCode>	
Description	Installation address postal area (e.g. 736 01)
Content	String datatype, alphanumeric, min length = 1, max length = 8
Syntax	<postCode> string datatype </postCode>
DTD Source	<!ELEMENT postCode (#PCDATA)> <!--PSC dodaci posty-->

3.4.6 Operator ID

<operatorID>	
Description	Unique identification code specific to an operator or service provider. The numbering plan of OperatorID will be in responsibility of CTU. CTU will assign to each and every operator with already assigned range of DDI (based on public network numbering plan) one code from range from 200 to 999.
Content	String datatype, numeric,length = 3, Examples: 212 = Aliatel 202 = O2 – O2 Czech Republic a.s. 234 = GTS Czech 224 = Ceske RadioKomunikace …etc
Parent	<recipientOperator,> <losingOperator> <donorOperator> <cpsOperator> <wlrOperator> <to> <from>
Syntax	<operatorID> string datatype </operatorID >
DTD Source	<!ELEMENT operatorID (#PCDATA)> <!-- Identifikátor operátora-->

3.4.7 Customer information

<customerReferenceNumber>	
Description	Number that appears on the customer bill (Referencni cislo platce)
Content	String datatype, alphanumeric, min length = 1, max length = 15
Parent	<npProvide> <cpsProvide> <wlrProvide> <wlrTerminate> <wlrModify>
Syntax	<customerReferenceNumber> string datatype </customerReferenceNumber
DTD Source	<!ELEMENT customerReferenceNumber(#PCDATA)> <!--Referencni cislo platce -->

<icoNumber>	
Description	This is the unique identification of the business customer, that appears on the customer bill that was send out by O2 In the case of a business customer this field is required. Note: if there is no ico number available for a business customer this is not a reason to reject the order

Content	String datatype, alphanumeric, min length = 1, max length = 15
Parent	<npProvide> <cpsProvide> <wlrProvide> <wlrTerminate> <wlrModify>
Syntax	<icoNumber> string datatype </icoNumber
DTD Source	<!ELEMENT icoNumber (#PCDATA)> <!—-ICO-->

3.4.8 Date and time

<date>	
Description	Standard element to describe date. Definition=CCYY-MM-DD where “CC“ stands for century, “YY” for year, "MM" for month and "DD" for day--> Example = to indicate 31 May 2002, you type <date>2002-05-31</date>
Content	sting datatype, alphanumeric, length = 10
Parent	<newPortDate> <portActivationDate> <dateSent>
Syntax	<date> string datatype </date>
Field requirements	Date must be valid calendar date, so not 2002-13-32
DTD Source	<!ELEMENT date (#PCDATA)> <!—datum-->

<time>	
Description	Standard element to describe time Definition= hh:mm:ss "hh", "mm", "ss" represent hours, minutes and seconds, respectively. Example=to indicate 1.20 p.m. enter <time>13:20:00</time> Time is always Central European Time, so the time in Czech republic. It is not possible to define the time zone.
Content	sting datatype, alphanumeric, length = 8

Parent	<newPortTime> <portActivationTime> <timeSent>
Syntax	<time> string datatype </time>
Field requirements	Time must be a valid time, so not 25:61
DTD Source	<!ELEMENT time (#PCDATA)> <!—Cas-->

3.4.9 CompleteTime and CompleteDate

<CompleteTime>	
Description	<wlrComplete> message element
Content	sting datatype, alphanumeric, length = 8
Parent	wlrComplete
Syntax	<CompleteTime> <time>10:00:00</time> </CompleteTime>
DTD Source	<!ELEMENT CompleteTime (time)>

<CompleteDate>	
Description	<wlrComplete> message element
Content	sting datatype, alphanumeric, length = 10
Parent	wlrComplete
Syntax	<CompleteDate> <date>2003-05-09</date> </CompleteDate>
DTD Source	<!ELEMENT CompleteDate (date)>

3.4.10 Tariff

<Tariff>	
Description	<wlrProvide>,<wlrModify> message element
Content	sting datatype, alphanumeric, length = 8
Parent	wlrProvide,wlrModify
Syntax	<tariff>CPSZ0068</tariff> #REQUIRED
Description	Example: CPSZ0068 (O2 MINI), CPSZ0069 (STANDARD), CPSZ0070 (TREND)
DTD Source	<!ELEMENT tariff (#PCDATA) >

3.4.11 ProductList

<ProductList>	
Description	<wlrProvide>,<wlrModify> message element
Content	ProductCode, string datatype, aplhanumeric, length= 6 Attribut_name, string datatype, aplhanumeric, length= 32 Attribut_value, string datatype, alphanumeric, length = 32
Parent	wlrProvide,wlrModify
Child	<Product> <ProductCode> #IF < /ProductCode> element is used #REQUIRED <Attribut_name> # REQUIRED <Attribut_value> # REQUIRED </Product>

Description	Example – Additional services using Product Code only
	
	DS0003, DS0004,DS0012……..
	
	<Product>
	<ProductCode> DS0004</ProductCode> element is used #REQUIRED
	</Product>
	
	Example – Product Codes using Attribut_Name and Attribut_value:
	
	<Product>
	<ProductCode>DS0009</ProductCode> # Outgoing calls baring
	<Attribut_name>Typ_omezeni</Attribut_name>
	<Attribut_value>1</Attribut_value>
	</Product>
	
	Where:
	# omezení odchozích volání # Outgoing calls baring
	Attribut_name = Typ_omezeni / fixed string
	Attribut_value = 0 = vsechny odchozi hovory mimo tisnovych
	Attribut_value = 1 = mezinarodni, dalkova, mobilni, cisla zacinajici 90,976 a internetova cisla
	Attribut_value = 2 = mezinarodni volani, cisla zacinajici 90,976
	Attribut_value = 3 = cisla zacinajici 90, 976
	Attribut_value = 4 = cisla zacinajici na 906, 909, 976
	
	<Product>
	<ProductCode>DS0017</ProductCode> # Password reset
	<Attribut_name>Duvod_zmeny</Attribut_name>
	<Attribut_value>Zapomenuti_hesla</Attribut_value>
	</Product>
	
	Where:
	Attribut_name = Duvod_zmeny / fixed string
	Attribut_value = Zapomenuti_hesla
	Attribut_value = Zmena_znameho_hesla
	
	<Product>
	<ProductCode>DS0010</ProductCode>
	<Attribut_name>Heslo</Attribut_name>
	<Attribut_value>00004554</Attribut_value>
	</Product>
	
	Where:
	
	# Outgoing call baring using password
	# Omezeni odchozich hovoru ucastnikem pres heslo
	
	Attribut_name = Heslo / fixed string

	Attribut_value = heslo # password is inserted here
Syntax	<ProductList> <Product> <ProductCode>DS0010</ProductCode> <Attribut_name>Heslo</Attribut_name> <Attribut_value>000111</Attribut_value> </Product> <Product> <ProductCode>DS0009</ProductCode> <Attribut_name>Typ_omezeni</Attribut_name> <Attribut_value>1</Attribut_value> </Product> <Product> <ProductCode>DS0004<product> </Product> </ ProductList>
DTD Source	<!ELEMENT ProductList (Product+)> <!--Seznam produktu--> <!ELEMENT Product (ProductCode, Attribut_name, Attribut_value)> <!--Vlastnosti produktu--> <!ELEMENT ProductCode (#PCDATA) > <!--produktovy kod WLR--> <!ELEMENT Attribut_name (#PCDATA) > <!--jmeno atributu produktu WLR--> <!ELEMENT Attribut_value (#PCDATA) > <!--hodnota atributu produktu WLR-->

3.4.12 Rejection

<rejectionCode>	
Description	Code indicating the reason why a message or file was rejected. See the chapter on error handling for a list of codes and their description
Content	String datatype, alphanumeric, min length = 1, max length = 4
Parent	<npReject>, <cpsReject>, <fileReject>,<wlrReject>
Syntax	<rejectionCode> string datatype </rejectionCode>
DTD Source	<!ELEMENT rejectionCode(#PCDATA)> <!--Kod odmitnuti-->

<rejectionDescription>	
Description	Description of the reason why a message was rejected. See the chapter on error handling for a list of codes ant there description
Content	String datatype, alphanumeric, min length = 1, max length = 50
Parent	<npReject>, <cpsReject>, <fileReject>,<wlrReject>
Syntax	<rejectionDescription> string datatype </rejectionDescription>
DTD Source	<!ELEMENT rejectionDescription (#PCDATA)>

<rejectionParameter>	
Description	Additional parameter to indicate the reason why a message was rejected. -
Content	String datatype, alphanumeric, min length = 1, max length = 200
Parent	<npReject>, <cpsReject>
Syntax	<rejectionParameter> string datatype </rejectionParameter>
DTD Source	<!ELEMENT rejectionParameter(#PCDATA)>

3.4.13 Message attributes specification

Attributes provide a means of associating simple properties with elements.

orderNr	
Description	Unique identification for each individual order of an operator Each individual NP PROVIDE, CPS PROVIDE or RETURN NUMBER message has a new order number. All other messages refer to existing ordernumbers. Cislo objednavky Each individual WLR Provide, WLR Modify, WLR Terminate NUMBER message has a new order number. All other messages refer to existing ordernumbers. WLR orders have different number format to NP,CPS Cislo objednavky
Content	NP,CPS Orders: String datatype Position 1 O Positon 2 to 9: numeric, pending zero's Example: O00000012 Note: the O is needed for correct usage of the XML id field WLR Orders: String datatype Position 1 W Positon 2 to 9: numeric, pending zero's Example: W00000012 Note: the O is needed for correct usage of the XML id field IF NP,CPS,WLR orders are sent in one ORDR file, Orders with O sequence

	first. Example how mixed NP,CPS,WLR orders are sent in ORDR file: O00000012 O00000013 O00000014 W00000006 W00000007
Field constrains	The orderNr must have an ascending sequence, except if a maximum is reached, and a rollover is required. Gaps are allowed. It is possible that two operators use the same ordernumber, only the combination with recipientOperatorID or cpsOperator makes it unique!
Attribute spec	orderNr ID #REQUIRED Note: The ID type makes the orderNr unique throughout the XML document (so the whole file). In the case of Subsequent Port CDATA is used, to enable multiple of these message types on one OrderNr within an XML document. In the case of npAbort CDATA is used, to enable an npReject and npAbort on the same order in one file.

sequenceNr	
Description	Each message for a single order has the same order number but has unique sequence number. Poradove cislo zpravy
Content	Sring datatype, numeric, min length = 1, max length = 2
Attribute requirements	The sequence number must be in ascending order with the prior message with the same order number sent by the same operator. Gaps are allowed. Each operator assigns its own sequence numbers independently of other operator(s) involved in the ordering process i.e. each operator is using its own number sequence.
Attribute spec	sequenceNr CDATA #REQUIRED

refSequenceNr	
Description	Refers to the SequenceNumber of the message that is rejected or accepted Referencni poradové cislo
Content	String datatype, numeric
Attribute spec	refSequenceNr CDATA #REQUIRED

complexOrder	
Description	Indicates if this specific order is a complex or a simple order

	Slozita objednavka
Content	Possible values: yes, no
Attribute spec	ComplexOrder (yes | no) #REQUIRED

refType	
Description	Contains the reference to the file type being referenced by respective fileAccept/fileReject message.
Content	Possible values: ORDR, RSLT, VLDT
Attribute spec	refType (ORDR | RSLT | VLDT) #REQUIRED

4 Error handling

4.1 Error handling principles

1. If the received file can not be processed due to file errors, a file of the type 'File acvknowledge/reject' will be sent back by start of business day 1 containing a fileReject message

2. Service orders over the access provider's or losing operator's daily order processing capacity (Quota rejection) will be rejected with a cpsReject or npReject message by Start of Business Day 1.

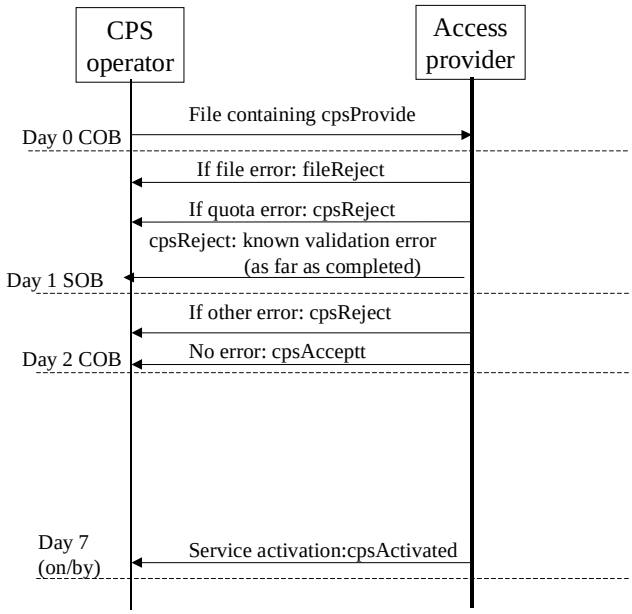
3. When there is an error in the order, the operator shall be sent a cpsReject or npReject message. Error orders shall be detected and rejected by Day 2 (two business days from when service order request is sent).

4. The validation file sent at 09.00 will contain orders rejected due to validation errors, however only those where order validation is completed before the submission of the file. Rejected orders processed after the submission of this file will be sent either by 18:00 on Day 1 or at the latest by 18:00 on Day 2.

5. Errors which are a result of the technical investigation of an NP order (errors in the directory number/DDI range) will be reported by Day from Referenc offer O2.

6. If the contract cancellation CAF for an NP order is not received by the losing operator within business days descripted on Referenc offer O2 the respective NP order is rejected.

7. If multiple mandatory parameters are missing then all missing mandatory parameters will be identified in the npReject or cpsReject message. If no mandatory parameters are missing then all syntax related errors will be identified in the npReject or cpsReject message.
   If there are no syntax errors in the NP order then all DNs will be verified and identified in the npReject message in case of any problems.
   Otherwise, the npReject or cpsReject message shall only identify the first parameter/field that contains an error



4.1.1 Rejection categories

The rejections are grouped in the following categories:

- File format — general problems with the received file
- Quota — quota is exceeded
- Field constraints — error(s) in individual fields
- Operator — operator not valid
- Logic of order — orders not in line with agreed principles
- Customer — customer data in message incorrect
- CAF — Customer cancellation form
- Directory number/DDI — number data in message incorrect

4.1.2 Rejection codes

The following pages contain a list of rejections possible,
The list contains the following columns:

- Constraints/requirements — the constraint this rejection code can be a result of
- Message — the message(s) this constraint applies to
- Rejection code — code indicating rejection reason
- Rejection description — description of the rejection reason
- Rejection parameter — parameter(s) which were rejected

The rejection code's first letter indicates the category.

NP Rejection codes table

Constraints/requirements	Message	Rejection		
		Code	Description	Parameter
File format				
The file must be a well-formed XML document, and in line with the DTD.	flat file	X001	XML not well formed or DTD error	none
The content of the <header> must be correct.	flat file	X002	Header error	none
The systems date of the file on the HTTP server of the operator receiving a file must be equal to the date in the header/filename.	flat file	X003	Wrong date	none
The flat file can only contain the message-types specified.	flat file	X004	Unexpected message	none

Quota				
An individual service order message cannot exceed the access providers' order processing capacity. *Note: the order quotas principles apply, as described in the PC document.*	cpsProvide npProvide npChange wlrProvide wlrModify	Q001	Order quota exceeded (for each individual order)	none

Field constraints				
Mandatory fields *(If multiple mandatory fields are missing, the parameter field will contain all)*	All	F001	Mandatory Field missing	Message tag of field(s) that is missing,
Multiplicity constraints *(If multiple fields have a constraint error, the parameter field will contain all fields)*	All	F002	Cardinality error	Message tag of field(s)
Field syntax constraints *(If multiple fields have a syntax error, the parameter field will contain all fields)* *(Note: Field syntax constraints are specified in the individual field specifications)*	All	F003	Incorrect, invalid or incomplete data	Message tag or field(s)

Operator				
The operator must be a registered operator (recipient, losing, donor, CPS operator, WLR operator)	All	O001	Operator unknown	OperatorId
A recipient operator must have a NP agreement with the donor operator of the number involved or agreement on the service.	cpsProvide npProvide wlrProvide	O002	No service establishment	OperatorID
The CSC code provided in the message must be a registered CSC code	cpsProvide	O003	CSC code invalid	The CSC code provided in the message must be a registered CSC code

Logic of order messages				
The <order nr> in a provide message must be in ascending order with previous order (but gaps are allowed).	cpsProvide npProvide wlrProvide wlrModify	L001	Out of sequence ordernumber	none
The <sequence number> in a message must be in ascending order with the previous message	All	L002	Sequence number out of sequence	none
Reference is only possible to an existing order (so no accept before provide)	All but provide	L003	Inappropriate message	none
The <portActivationTime> in a <npProvide> message must be between 6 am and 10 pm	npProvide	L004	Port time invalid	none
The <portActivationDate> in a <npProvide> message must be on day 15 (15 business days from receipt of the npProvide). Exception: if the <portActivationDate> is a Saturday or Sunday, Day 15 must be the last business day of the week (in most cases Friday)	npProvide	L005	Port date invalid	none
The <donorOperator> receiving a <subsequentPort> must correct.	npSubsequentPort	L006	Sent to wrong operator	none
An <npChange> and <npCancel> message must be received at least four business days before current port date	npChange	L007	npChange/npCancel received too late	none
The <newPortDate> in a <npChange> must be exactly 15 business days after the date this message was sent (<dateSend> in header). Exception: if the <portActvationDate> is a Saturday or Sunday, Day 15 must be the last business day of the week (in most cases ftiday)	npChange	L008	new Port date invalid	none
The <newPorttime> in a NP Change must be later then current port time and be between 6 am and 10 pm	npChange	L009	New Port time older then current port time	none
The order shall be rejected if the request is for a GNP port of a non-geographic number and vice versa	npProvide	L010	Service type incorrect	none
The <complex order> indicator in a provide must be in line with the actual content of the order	cpsProvide npProvide	L011	Order complexity incorrect	none

The <donorOperator> receiving a <npReturnNumber> must be correct.	npReturnNumber	L012	Sent to wrong operator	none
Incorrect number	cpsProvide npProvide	L013	Phone number beginning with 9	
Incorret number for automatic processing	cpsProvide npProvide	L014	Access to public telephone networks with an access code service starting with 95, 972, 973 and 974- manual processing	

Customer				
The customer must belong to the losing operator or access provider receiving a message.	cpsProvide npProvide wlrProvide	C001	Customer not known	none
The customer must be allowed to port (as defined in PC)	npProvide	C002	Customer not subjected to NP	none
The <callinglineID> in a message must be applicable to CPS (as defined in [VPNPC]) or WLR	cpsProvide wlrProvide	C003	Number not subjected to CPS or WLR	none
The customer must be allowed to subscribe to CPS (as defined in [VPNPC]) or WLR	cpsProvide wlrProvide	C004	Customer not subjected to CPS or WLR	none
Valid subscriber has to be deliver	cpsProvide npProvide wlrProvide	C101	Subscriber number (DN) does not exist/active or Subscriber number (DN) and Payer Reference Number do not match	
Pending order due to change of owner	cpsProvide npProvide wlrProvide	C102	Pending order for change of ownership	
Pending order due to incompatibility of price plane with CPS	cpsProvide npProvide wlrProvide	C103	Pending order for change of price plan incompatible with CPS	
Valid customer data has to be real	cpsProvide npProvide wlrProvide	C105	Inconsistent Customer Information	

Customer CAF				
The customer contract cancellation CAF for a NP Provide must be received by day 10 (10 business days from receipt of the message)	npProvide	C005	Missing customer cancellation CAF	none
The customer contract cancellation CAF content must	npProvide	C006	Inconsistent information between PROVIDE and	none

be consistent with <npProvide> message.			contract cancellation CAF	
The customer contract cancellation is incorect.	npProvide	C007	Incorrect CAF or CVOP	none
Directory Number/DDI				
The <directoryNumber> or <ddiRange> in a provide must belong to the losing operator	npProvide	N001	Sent to wrong operator	none
The <directoryNumber> or <ddiRange> in a npProvide message may not be already exported	npProvide	N002	Number has already been ported	director y number/ DDI range
The <directoryNumber> or <ddiRange> in a npProvide message must be applicable to NP or WLR	npProvide wlrProvide	N003	Number not subjected to NP or WLR	director y number/ DDI range
An individual <directoryNumber> of a customer can not be ported out of an existing DDI range.	npProvide	N004	Cannot port individual number out of DDI range	director y number
The <directoryNumber> or <ddiRange> in a npProvide must be correct	npProvide wlrProvide	N005	directoryNumber or DDI range incorrect	director y number/ DDI range
Chybí MSN číslo	npProvide wlrProvide	N006	Chybí MSN číslo	None
Chybné MSN číslo	npProvide wlrProvide	N007	Chybné MSN číslo	None
Duplicitní objednávka	npProvide wlrProvide	N008	Duplicitní objednávka	None
Chybí LLU Provide	npProvide wlrProvide	N009	Chybí LLU Provide	None
WLR				
It must be separated in advance	wlrProvide wlrModify	W001	Tariff in not valid or ordered telephone number is part of a bundled services	
Supplementary service is not valid or applicable to the service provided	wlrProvide wlrModify	W002	Supplementary service is not valid or applicable to the service provided	
No WLR service on the line/number	wlrModify	W003	No WLR service on the line/number	
Chybné číslo účastníka	wlrModify	W004	chybné CLI	
duplicitní objednávka	wlrModify	W005	duplicitní s jiným požadavkem	
Chybné referenční číslo	wlrModify	W006	Chybné referenční číslo	
NTčko v nájmu	wlrModify	W007	NTčko v nájmu	
chybně uvedený účastník	wlrModify	W008	chybně uvedený účastník	
nekompatibilní doplňková služba	wlrModify	W009	nekompatibilní DS	
chybí DS nezbytná pro funkčnost služby	wlrModify	W010	chybí DS nezbytná pro funkčnost služby	

neplatný CP	wlrModify	W011	neplatný CP	
Přípojka je součástí nekompatibilního bundlu	wlrModify	W012	Přípojka je součástí nekompatibilního bundlu	
WLR nelze zřídit k tomuto typu přípojky	wlrModify	W013	WLR nelze zřídit k tomuto typu přípojky	
Other error	wlrModify	W099	Other error	

5 APPENDIX A: OUTAGE SITUATIONS (NP AND CPS)

The following business rules shall apply when an operator experiences an outage of their HTTPS server:

If the outage is resolved prior to 3:00 PM, or lasts less than 30 minutes, it shall be the responsibility of other operators to re-attempt transmission of their batch files at a later time during the day.

If the outage occurs after, or extends beyond, 3:00 PM and lasts for more than 30 minutes, the operator shall extend the operating window of its server for two hours beyond COB. Other operators shall then be responsible for re-attempting their batch file transmissions during this extended period.

If the operator is unable to restore the server's operation and comply with the two-hour extension requirement, the operator shall adjust its industry quota limit to assist in clearing the order backlog. The following business rules shall apply for this process:

- The operator shall increase its overall industry quota limit by five percent for the next 20 business days.
- If the outage spans multiple days, the five percent industry quota increase shall extend an additional 20 business days for each additional day of outage.
- It shall be the responsibility of other operators to effectively use this increased quota capacity to satisfy their business needs.

The operator will announce the extended operating window or adjustment of the quota by a FAX message.

6 APPENDIX B: INSTALLATION ADDRESS REFERENCES (NP AND CPS)

The following two references describe standardisation of addresses in the Czech Republic:

A Číselníky České pošty na: http://www.ceskaposta.cz/

1. Přehled adresních míst
Jedná se o soustavu níže uvedených číselníků jednoznačně identifikujících dodací místo pro adresování zásilek. Patří sem číselníky:

- Okresy s údaji: kód okresu a název okresu,
- Seznam obcí a jejich částí s údaji: kód okresu, kód obce, název obce, kód části obce, název části obce, využitelné PSČ v obci, resp. v části obce,
- Ulice obsahující přehled všech ulic v obcích a jejich částech v ČR s údaji: kód obce, kód části obce, kód ulice, název ulice, využitelné PSČ v ulici (u ulic, které mají více využitelných PSČ než jedno je položka PSČ nevyplněna), původní název ulice, městský obvod,
- Adresy s údaji: kód obce, kód části obce, kód ulice, kód adresy, číslo popisné/evidenční, číslo orientační, PSČ adresy, číselník. Přehled pošt v ČR s údaji: název pošty, PSČ, kód a název okresu.

2. PSČ organizací
Soubor obsahuje tyto údaje: PSČ přidělená vybraným organizacím, název organizace, číslo přihrádky nebo adresa, název dodávací pošty, kód okresu.

3. PSČ v ulici I
Soubor obsahuje seznam všech PSČ ulic, v nichž je evidována alespoň jedna adresa.
Struktura číselníku: kód okresu, kód obce, název obce, kód části obce, název části obce, kód ulice, název ulice, využitelné PSČ. (vyplněno pouze u ulic, které mají pouze jedno využitelné PSČ)

4. PSČ v ulici II
Soubor obsahuje seznam adres v ulicích, u nichž je užito více než jedno PSČ.
Struktura číselníku: kód okresu, kód obce, název obce, kód části obce, název části obce, kód ulice, název ulice, kód adresy, číslo popisné/evidenční, číslo orientační, využitelné PSČ v ulici.

5. PSČ v ulici III
Soubor obsahuje výběr ze seznamu ulic a k nim příslušejících PSČ, kdy v jedné obci existuje více PSČ, ale pro celou ulici platí jediné PSČ. Struktura číselníku: kód okresu, kód obce, název obce, kód části obce, název části obce, kód ulice, název ulice, využitelné PSČ v ulici.

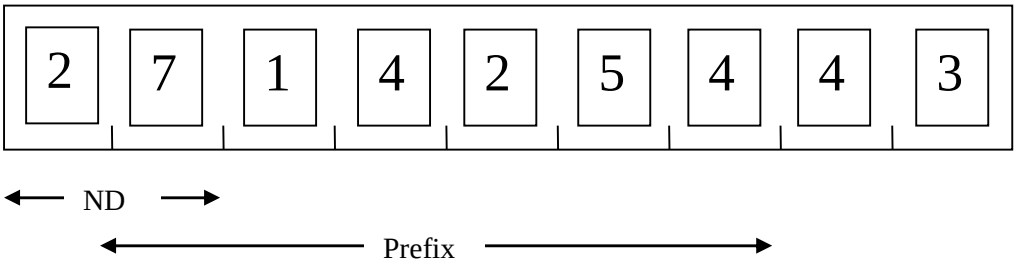
B, MINISTERSTVO PRO MÍSTNÍ ROZVOJ: http://www.mmr.cz/:

Územně identifikační registr základních sídelních jednotek
Vyhledávání dle názvu obce a dle okresu.

7 APPENDIX C: DDI numbering

7.1 Detailed Number rules for Ordering CPS over DDI services

The new numbering plan for the Czech Republic consists of 9 numbers since 22nd September 2002)



For the purposes of representing a DDI Prefix in a CPS order the number has the following structure (from left to Right):

1. National Destination Code (NDC) is the first 1 or 2 digits
2. Prefix is the next 2 to 7 Digits

The remaining digit(s) should not be presented in the DDI Prefix in a CPS order.

O2 provides DDI ranges in block sizes of 10, 100, 1000, 10000 and 100000 numbers. Therefor a DDI prefix in a CPS order must be between 4 and 8 digits long.

Example 1

A customer in Prague has purchased a DDI range of 100 numbers, the whole range is active on the network. A valid dialling sequence to the customer would consist of:

NDC = 2
Prefix = 234567
Remaining Digits 00 to 99

The DDI Prefix in a CPS order should be seven digits long as follows: 2234567

Example 2

A customer in Prague has purchased a DDI range of 10000 numbers, the whole range is active on the network. A valid dialling sequence to the customer would consist of:

NDC = 2
Prefix = 4567
Remaining Digits 0000 to 9999

The DDI Prefix in a CPS order should be five digits long as follows: 24567

7.2 Sub-Ranges and The Customer's Active DDI Range

Customer's may ask for the whole range or for sub-ranges to be activated. If only a sub-range is active then a DDI block Id is used to identify the active blocks. A DDI block id a single digit '0' through '9'. A service could have several sub-ranges active.

The DDI prefix in a CPS order should be the NDC, Prefix and DDI Block Id of one of the active DDI sub-ranges.

Example 3

A customer in Prague has purchased a DDI range of 1000 numbers but only 3 sub-ranges are active. The table below shows the active ranges.

NDC	Prefix	DDI Block Id	Remaining Digits
2	56789	0	Not Active
2	56789	1	00 to 99
2	56789	3	Not Active
2	56789	4	00 to 99
2	56789	5	Not Active
2	56789	6	00 to 99
2	56789	7	Not Active
2	56789	8	Not Active
2	56789	9	Not Active

A valid dialling sequence to the customer would consist of:

NDC = 2
Prefix = 56789
DDI block Id = 1 or 4 or 6
Remaining Digits 00 to 99

The DDI Prefix in a CPS order should be seven digits long as follows: 2567891 or 2567894 or 2567896. Any one of the DDI prefixes shown will result in the whole of the service having CPS applied. An order showing any other number as the DDI prefix would be rejected as not a valid number.

8 APPENDIX E: DTD DISTRIBUTION AND CHANGE MANAGEMENT (NP AND CPS)

The DTD will be stored on a secured WEB server, which can only be accessed (read only) by licenced operators.
One of the menbers of APVTS will control the access rights.

Change management principles

1. The inter-operator interface document and the DTD file will be maintained by O2.
2. Operators can issue change requests on the document/DTD to O2 via APVTS meetings
3. O2 will analyze the impact of the change request on the interface specification.
4. The received change requests + analysis will be distributed among operators. All operators will analyze the impact on their specific interface.
   A regular APVTS meeting (frequency to be decided) will decide if the change request is accepted, and in which version of the document/DTD the change will be implemented
5. It is proposed to have a new version of the document/DTD no more then two times a year
6. Anouncements of new versions of the DTD will be sent via e-mail to all licensed operators with access to the DTD file on the APVTS web server.
7. The DTD will get a version number in the header (first version: 1.0)
8. The implementation/and testing of the new interface document/DTD will be specifically planned for each new version.
9. According to the plan described in 7) a new version of the DTD will be installed on the APVTS web server
10. Both the document and the DTD will hold a change log

9 APPENDIX F: HANDLING FRAUDULENT ORDERS (NP AND CPS)

The following business rules shall apply for detecting and responding to fraudulent CPS orders:

- The batch file acknowledgment sent by the Access Provider shall be used by the CPS operator to detect fraudulent transmissions of batch files. If a CPS operator receives a batch file acknowledgment that it was not expecting, it shall be the responsibility of the CPS operator to detect these fraudulent transmissions and immediately notify the Access Provider.
- The ACTIVATE message sent by the Access Provider shall be used by the CPS operator to detect fraudulent insertion of individual CPS orders into a batch file. If a CPS operator receives an ACTIVATE message that cannot be matched to a corresponding PROVIDE message, it shall be the responsibility of the CPS operator to detect these fraudulent orders and immediately notify the Access Provider.
- In both of the above cases, the Access Provider shall attempt to reverse the fraudulent orders.

10 APPENDIX G: BRIEF EXPLANATION ON DTD NOTATION (NP AND CPS)

A Document Type Definition (DTD) describes the grammar of the language defined, and ensures that a document can provide a parser with meta-information about the content of the document. Meta-information defines the permitted sequence and nesting of tags, attribute values with their types and default values, the names of external files which may be referred to, formats of external (non-XML) data that can be used, and entities.
Products of the W3C XML Activity can be found on www.w3.org/xml.

A DTD can be explicitly written into the header of an XML document or can consist of a reference. A combination of reference and inclusion in the header is also possible.

Element declarations.

These indicate the names and content type of the elements. For example:

<!ELEMENT book (title, subtitle?, author+)>

This example indicates that the element ‘book’ consists of the content: title, subtitle (where relevant) and one or more authors. The elements named in the content of an element must also be specifically declared as elements (in this case: title, subtitle and author).
Instead of the ', 'separator between elements also a ' | ' can be used, to indicate a choice.

Entity declarations.

These can be used to associate a name with another fragment in the document; they are actually macros, therefore. Entity declaration can involve a piece of regular text (abbreviation), part of the document type declaration (import), or a reference to an external file that contains text or binary data. A number of examples:

<!ENTITY ATI “ArborText, Inc.”>
<!ENTITY boilerplate SYSTEM “/standard/legalnotice.xml”>
<!ENTITY ATIlogo SYSTEM “/standard/logo.gif” NDATA GIF*&A>

Notation declarations.

These identify specific types of external binary data. The information is passed on to the processing application, which can use it in whatever way it requires. For example:

<!NOTATION GIF87A SYSTEM “GIF”>

Optionality in a DTD

Optionality of an element "element" is indicated as:

Element	occurrence of element is 1
Element?	occurrence of element is 0 or 1
Element+	occurrence of element is 1 or more
Element*	occurrence of element is 0 or more

Naming conventions

Names consist of a maximum of 4 words joined to each other without spaces, the first word beginning with a low letter and the following words beginning with a capital letter. This is called "lowerCamelCase". Use “lowerCamelCase” for properties, references, etc.
For example: <dateDue>.

11 APPENDIX H: DTD

C:\
_CONTECH_PROJEKT

```
<!ELEMENT installatioFirstName ( #PCDATA ) >
<!ELEMENT installatioSurname ( #PCDATA ) >
<!ELEMENT installationCompanyName ( #PCDATA ) >
<!ELEMENT installationdescription ( #PCDATA ) >
<!ELEMENT minspeed ( #PCDATA ) >
<!ELEMENT newActivationDate ( date ) >
<!ELEMENT newActivationTime ( time ) >
<!ELEMENT postCode ( #PCDATA ) >
<!ELEMENT serviceInstallationOwner ( (installatioSurname, installatioFirstName) |
(installationCompanyName, icoNumber) ) >
<!ELEMENT speedAccept ( #PCDATA ) >
<!ELEMENT streetName ( #PCDATA ) >
<!ELEMENT time ( #PCDATA ) >
<!ELEMENT uircode ( #PCDATA ) >
<!ELEMENT billingaccount ( #PCDATA ) >
<!ELEMENT city ( #PCDATA ) >
<!ELEMENT citySection ( #PCDATA ) >
<!ELEMENT contactName ( #PCDATA ) >
<!ELEMENT contactPerson ( #PCDATA ) >
<!ELEMENT contactemail ( #PCDATA ) >
<!ELEMENT district ( #PCDATA ) >
<!ELEMENT speedRequired ( #PCDATA ) >
<!ELEMENT expectedActivationDate ( date ) >
<!ELEMENT expectedActivationTime ( time ) >
<!ELEMENT newPortTime (time)>
<!ELEMENT serviceContractOwner ((ownerSurname, ownerFirstName) | ownerCompanyName)>
<!ELEMENT serviceDisconnectionTime (time)>
<!ELEMENT installationAddress ( uircode?,((housenumberA, housenumberB) | housenumberA |
housenumberB), streetName, city, citySection?, district, postCode, contactName?, contactPerson?,
contactemail?, installationdescription?, speedRequired? )>
<!ELEMENT newPortDate (date)>
<!ELEMENT operatorID (#PCDATA)>
<!ELEMENT preActivated (cpsOperator, callingLineID)>
<!ATTLIST preActivated
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT header (toOperator, fromOperator, fileType, messageCount, timeSent, dateSent)>
<!ELEMENT cpsActivated (cpsOperator, callingLineID)>
<!ATTLIST cpsActivated
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT serviceDisconnectionDate (date)>
<!ELEMENT housenumberB (#PCDATA)>
<!ELEMENT housenumberA (#PCDATA)>
<!ELEMENT fileType (#PCDATA)>
<!ELEMENT cpsReject (cpsOperator, rejectionCode, rejectionDescription?, rejectionParameter*)>
```

```
<!ATTLIST cpsReject
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT icoNumber (#PCDATA)>
<!ELEMENT ddiRange (ddiRangeStart, ddiRangeEnd)>
<!ELEMENT npAbort (recipientOperator, losingOperator)>
<!ATTLIST npAbort
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT timeSent (time)>
<!ELEMENT fileAccept (refTimeSent, refDateSent)>
<!ATTLIST fileAccept
        refType (ORDR | RSLT | FLAC | VLDT | LLUORDR | LLURSLT | LLUFLAC | LLUVLDT)
#REQUIRED
>
<!ELEMENT acknFile (header, (fileAccept | fileReject)*)>
<!ELEMENT rejectionCode (#PCDATA)>
<!ELEMENT ownerSurname (#PCDATA)>
<!ELEMENT messageCount (#PCDATA)>
<!ELEMENT callingLineID (#PCDATA)>
<!ELEMENT resultFile (header, (npReject | cpsReject | cpsAccept | npAccept | npAbort |
npIDcheckResp | cpsActivated | preActivated | preReject | preAccept | wlrAccept | wlrReject |
wlrComplete)*)>
<!ELEMENT npPortComplete (recipientOperator, losingOperator)>
<!ATTLIST npPortComplete
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT portActivationTime (time)>
<!ELEMENT refDateSent (date)>
<!ELEMENT portActivationDate (date)>
<!ELEMENT directoryNumber (#PCDATA)>
<!ELEMENT npChange (recipientOperator, losingOperator, newPortDate, newPortTime)>
<!ATTLIST npChange
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT ddiRangeStart (#PCDATA)>
<!ELEMENT ownerCompanyName (#PCDATA)>
<!ELEMENT cscCode (#PCDATA)>
<!ELEMENT losingOperator (operatorID)>
<!ELEMENT preAccept (cpsOperator, billingperiod)>
<!ATTLIST preAccept
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT ownerFirstName (#PCDATA)>
<!ELEMENT cpsProvide (cpsOperator, cscCode, serviceContractOwner, installationAddress,
customerReferenceNumber, icoNumber?, callingLineID)>
<!ATTLIST cpsProvide
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        cpsServiceType (nat | intl | both) #REQUIRED
```

```
        complexOrder (yes | no | Yes | No) #REQUIRED
        pre (true | false) #IMPLIED
        invoice (true | false) #IMPLIED
>
<!ELEMENT npAccept (recipientOperator, losingOperator)>
<!ATTLIST npAccept
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT npCancel (recipientOperator, losingOperator)>
<!ATTLIST npCancel
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT customerReferenceNumber (#PCDATA)>
<!ELEMENT dateSent (date)>
<!ELEMENT fileReject (refTimeSent, refDateSent, rejectionCode, rejectionDescription)>
<!ATTLIST fileReject
      refType (ORDR | RSLT | FLAC | VLDT | LLUORDR | LLURSLT | LLUFLAC | LLUVLDT)
#REQUIRED
>
<!ELEMENT fromOperator (operatorID)>
<!ELEMENT preTerminate (cpsOperator, cscCode, serviceContractOwner, installationAddress,
customerReferenceNumber, icoNumber?, callingLineID)>
<!ATTLIST preTerminate
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        cpsServiceType (nat | intl | both) #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
>
<!ELEMENT npReturnNumber (recipientOperator, donorOperator, (directoryNumber | ddiRange),
serviceDisconnectionDate, serviceDisconnectionTime)>
<!ATTLIST npReturnNumber
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT rejectionParameter (#PCDATA)>
<!ELEMENT orderFile (header, (cpsProvide | npProvide | npCancel | npChange | npPortComplete |
npSubsequentPort | npReturnNumber | npIDcheck | preProvide | preTerminate | wlrProvide |
wlrTerminate | wlrModify)*)>
<!ELEMENT validateFile (header, (npReject | npIDcheckResp | cpsReject | preReject)*)>
<!ELEMENT rejectionDescription (#PCDATA)>
<!ELEMENT toOperator (operatorID)>
<!ELEMENT cpsOperator (operatorID)>
<!ELEMENT npReject (recipientOperator, losingOperator, rejectionCode, rejectionDescription?,
rejectionParameter*)>
<!ATTLIST npReject
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT npProvide (recipientOperator, losingOperator, serviceContractOwner,
installationAddress, customerReferenceNumber, icoNumber?, (directoryNumber+ | ddiRange+),
npIDinfo?, npIDattachment?, portActivationDate, portActivationTime)>
<!ATTLIST npProvide
        orderNr CDATA #REQUIRED
```

```
        sequenceNr CDATA #REQUIRED
        npServiceType (geog | non_geog) #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        hasLLU (true | false) #IMPLIED
>
<!ELEMENT recipientOperator (operatorID)>
<!ELEMENT preReject (cpsOperator, rejectionCode, rejectionDescription?, rejectionParameter*)>
<!ATTLIST preReject
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT npIDinfo (npID, spIDout?, spIDin? ) >
<!ELEMENT npID  (#PCDATA) >
<!ELEMENT spIDout  (#PCDATA) >
<!ELEMENT spIDin  (#PCDATA) >

<!ELEMENT npIDattachment (attachment) >

<!ELEMENT attachment  (#PCDATA)>     <!-- base64Binary -->

<!ELEMENT npIDcheck         (recipientOperator, losingOperator , npIDnumber, directoryNumber)
>
<!ATTLIST npIDcheckorderNr CDATA #REQUIRED
                            sequenceNr CDATA #REQUIRED
>
<!ELEMENT npIDcheckResp   (recipientOperator, losingOperator , npIDnumber, directoryNumber,
npIDcorrect) >
<!ATTLIST npIDcheckResp     orderNr CDATA #REQUIRED
                            sequenceNr CDATA #REQUIRED
>
<!ELEMENT npIDnumber  (#PCDATA) >

<!ELEMENT npIDcorrect   (#PCDATA) >
<!ATTLIST npIDcorrect  resp (Y|N) #REQUIRED>

<!ELEMENT cpsAccept (cpsOperator)>
<!ATTLIST cpsAccept
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT npSubsequentPort (recipientOperator, donorOperator, losingOperator,
(directoryNumber | ddiRange))>
<!ATTLIST npSubsequentPort
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT date (#PCDATA)>
<!ELEMENT donorOperator (operatorID)>
<!ELEMENT ddiRangeEnd (#PCDATA)>
<!ELEMENT refTimeSent (time)>
<!ELEMENT billingperiod (#PCDATA)>
<!ELEMENT preProvide (cpsOperator, cscCode, serviceContractOwner, installationAddress,
customerReferenceNumber, icoNumber?, callingLineID)>
<!ATTLIST preProvide
        orderNr CDATA #REQUIRED
```

```
        sequenceNr CDATA #REQUIRED
        cpsServiceType (nat | intl | both) #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        invoice (true | false) #IMPLIED
>
<!ELEMENT CeaseForReturnLine (lluOperator, loopID)>
<!ATTLIST CeaseForReturnLine
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT PSDMask (#PCDATA)>
<!ELEMENT lluLQM (lluOperator, callingLineID, refOrderNr, submitDate, submitTime)>
<!ATTLIST lluLQM
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        lluCOS (A | B | C | D | E | F | G) #REQUIRED
        loops CDATA #IMPLIED
>
<!ELEMENT LLUvalidateFile (header, (lluReject)*)>
<!ELEMENT MDFID (#PCDATA)>
<!ELEMENT lluLQI (lluOperator, customerReferenceNumber, callingLineID, submitDate,
submitTime)>
<!ATTLIST lluLQI
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        lluCOS (A | B | C | D | E | F | G) #REQUIRED
        loops CDATA #IMPLIED
>
<!ELEMENT lluChangeCOS (lluOperator, loopID)>
<!ATTLIST lluChangeCOS
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        currentCOS (A | B | C | D | E | F | G) #REQUIRED
        newCOS (A | B | C | D | E | F | G) #REQUIRED
>
<!ELEMENT lluReturnLine (lluOperator, loopID)>
<!ATTLIST lluReturnLine
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT lluAbort (lluOperator)>
<!ATTLIST lluAbort
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT lluConvert (lluOperator, callingLineID, loopID, convertDate, convertTime)>
<!ATTLIST lluConvert
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        lluServiceType (PPV | PPVNP) #REQUIRED
        lluCOS (A | B | C | D | E | F | G) #REQUIRED
>
<!ELEMENT lluChange (lluOperator, orderActivationDate, orderActivationTime)>
```

```
<!ATTLIST lluChange
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT lluSlaChange (lluOperator, SLALevel, loopID)>
<!ATTLIST lluSlaChange
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT correlation (callingLineID, MDFID?, rejectionCode?, rejectionDescription?)>
<!ELEMENT lluComplete (lluOperator, loopID, loopID2?, loopID3?)>
<!ATTLIST lluComplete
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT correlationsList (correlation+)>
<!ELEMENT lluCancel (lluOperator)>
<!ATTLIST lluCancel
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT lluAccept (lluOperator, PSDMask?, MDFID?)>
<!ATTLIST lluAccept
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT loops (#PCDATA)>
<!ELEMENT convertTime (time)>
<!ELEMENT loopID (#PCDATA)>
<!ELEMENT loopID2 (#PCDATA)>
<!ELEMENT loopID3 (#PCDATA)>
<!ELEMENT LLUacknFile (header, (fileAccept | fileReject)*)>
<!ELEMENT lluMDFQuery (lluOperator, CLIList)>
<!ATTLIST lluMDFQuery
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT lluOrderFile (header, (lluProvide | lluProvideB | lluconfirm | lluTransfer | lluConvert |
lluChangeCOS | lluReturnLine | lluLQI | lluLQM | lluMDFQuery | ceaseForTransfer |
CeaseForReturnLine |
lluSlaChange | lluChange | lluCancel | lluComplete)*)>
<!ELEMENT lluTransfer (recipientOperator, customerReferenceNumber, callingLineID, loopID,
HDFPairNumber, MDFID, orderActivationDate, orderActivationTime)>
<!ATTLIST lluTransfer
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        lluServiceType (PPV | PPVM | SPV | SPVM | PPVNP | PPVNPM) #REQUIRED
        lluCOS (A | B | C | D | E | F | G) #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        loops CDATA #IMPLIED
>
<!ELEMENT convertDate (date)>
<!ELEMENT lluInstallationComplete (lluOperator, loopID, loopID2?, loopID3?, HDFPairNumber,
HDFPairNumber2?, HDFPairNumber3?, MDFID, orderActivationDate, orderActivationTime)>
<!ATTLIST lluInstallationComplete
        orderNr CDATA #REQUIRED
```

```
        sequenceNr CDATA #REQUIRED
        RefSequenceNr CDATA #REQUIRED
>
<!ELEMENT LLUresultFile (header, (lluAccept | lluReject | lluAbort | lluMDFResponse |
lluInstallationComplete | lluinformation | lludatetime | lluSlaActivated)*)>
<!ELEMENT HDFPairNumber (#PCDATA)>
<!ELEMENT HDFPairNumber2 (#PCDATA)>
<!ELEMENT HDFPairNumber3 (#PCDATA)>
<!ELEMENT CLI (callingLineID, customerReferenceNumber)>
<!ELEMENT CLIList (CLI+)>
<!ELEMENT lluMDFResponse (lluOperator, correlationsList)>
<!ATTLIST lluMDFResponse
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT lluReject (lluOperator, MDFID, rejectionCode, rejectionDescription,
rejectionParameter)>
<!ATTLIST lluReject
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!ELEMENT orderActivationTime (time)>
<!ELEMENT lluOperator (operatorID)>
<!ELEMENT submitTime (time)>
<!ELEMENT lluProvide (lluOperator, customerReferenceNumber, callingLineID+, HDFPairNumber,
HDFPairNumber2?, HDFPairNumber3?, MDFID, SLALevel?, orderActivationDate,
orderActivationTime)>
<!ATTLIST lluProvide
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        complexOrder (yes | no | Yes | No) #REQUIRED
        lluServiceType (PPV | PPVM | SPV | PPVNPM | PPVNP) #REQUIRED
        lluCOS (A | B | C | D | E | F | G) #REQUIRED
        lluLQMOrderNr CDATA #IMPLIED
        loops CDATA #IMPLIED
>
<!ELEMENT lluProvideB ( lluOperator, billingaccount?, minspeed?, SLALevel?,
serviceInstallationOwner, installationAddress,
                expectedActivationDate, expectedActivationTime  ) >
<!ATTLIST lluProvideB lluCOS (A | B | C | D | E | F | G) #REQUIRED >
<!ATTLIST lluProvideB lluServiceType (PPV | PPVM | SPV | SPVM | PPVNP | PPVNPM | PPVB)
#REQUIRED >
<!ATTLIST lluProvideB orderNr CDATA #REQUIRED >
<!ATTLIST lluProvideB sequenceNr CDATA #REQUIRED >

<!ELEMENT lluconfirm ( lluOperator, HDFPairNumber, MDFID ) >
<!ATTLIST lluconfirm orderNr NMTOKEN #REQUIRED >
<!ATTLIST lluconfirm refSequenceNr NMTOKEN #REQUIRED >
<!ATTLIST lluconfirm sequenceNr NMTOKEN #REQUIRED >

<!ELEMENT lludatetime ( lluOperator, newActivationDate, newActivationTime ) >
<!ATTLIST lludatetime orderNr CDATA #REQUIRED >
<!ATTLIST lludatetime refSequenceNr CDATA #REQUIRED >
<!ATTLIST lludatetime sequenceNr CDATA #REQUIRED >
```

```
<!ELEMENT lluinformation ( lluOperator, MDFID, speedAccept ) >
<!ATTLIST lluinformation orderNr CDATA #REQUIRED >
<!ATTLIST lluinformation refSequenceNr CDATA #REQUIRED >
<!ATTLIST lluinformation sequenceNr CDATA #REQUIRED >

<!ELEMENT lluSlaActivated ( lluOperator, SLALevel, loopId) >
<!ATTLIST lluSlaActivated orderNr CDATA #REQUIRED >
<!ATTLIST lluSlaActivated refSequenceNr CDATA #REQUIRED >
<!ATTLIST lluSlaActivated sequenceNr CDATA #REQUIRED >

<!ELEMENT SLALevel (#PCDATA)>

<!ELEMENT orderActivationDate (date)>
<!ELEMENT submitDate (date)>
<!ELEMENT ceaseForTransfer (losingOperator, loopID, MDFID, PSDMask)>
<!ATTLIST ceaseForTransfer
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!ELEMENT refOrderNr (#PCDATA)>

<!ELEMENT wlrProvide (wlrOperator, customerReferenceNumber, callingLineID,
serviceContractOwner, installationAddress, icoNumber?, tariff, ProductList)>
<!ATTLIST wlrProvide
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!--zrizeni WLR-->
<!ELEMENT wlrModify (wlrOperator, customerReferenceNumber, callingLineID,
serviceContractOwner, installationAddress, icoNumber?, tariff, ProductList)>
<!ATTLIST wlrModify
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!--zmena WLR-->
<!ELEMENT wlrTerminate (wlrOperator, customerReferenceNumber, callingLineID,
serviceContractOwner, installationAddress, icoNumber?)>
<!ATTLIST wlrTerminate
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
>
<!--zruseni WLR-->
<!ELEMENT wlrReject (wlrOperator, rejectionCode, rejectionDescription?)>
<!ATTLIST wlrReject
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!--Odmitnuti WLR-->
<!ELEMENT wlrAccept (wlrOperator)>
<!ATTLIST wlrAccept
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!--Accept WLR-->
<!ELEMENT wlrComplete (wlrOperator, CompleteDate, CompleteTime)>
```

```
<!ATTLIST wlrComplete
        orderNr CDATA #REQUIRED
        sequenceNr CDATA #REQUIRED
        refSequenceNr CDATA #REQUIRED
>
<!--Dokonceni WLR-->
<!ELEMENT ProductList (Product+)>
<!--Seznam produktu-->
<!ELEMENT Product (ProductCode, Attribut_name, Attribut_value)>
<!--Vlastnosti produktu-->
<!ELEMENT wlrOperator (operatorID)>
<!--Operator WLR-->
<!ELEMENT CompleteDate ( date ) >
<!--datum ukonceni WLR-->
<!ELEMENT CompleteTime ( time ) >
<!--cas ukonceni WLR-->
<!ELEMENT tariff ( #PCDATA ) >
<!--tarif WLR-->
<!ELEMENT ProductCode ( #PCDATA ) >
<!--produktovy kod WLR-->
<!ELEMENT Attribut_name ( #PCDATA ) >
<!--jmeno atributu produktu WLR-->
<!ELEMENT Attribut_value ( #PCDATA ) >
<!--hodnota atributu produktu WLR-->
```

12 APPENDIX I: XML FILE EXAMPLES

12.1 ORDR

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE orderFile PUBLIC "" "np_cps.dtd">
<orderFile>
    <header>
        <toOperator>
            <operatorID>202</operatorID>
        </toOperator>
        <fromOperator>
            <operatorID>212</operatorID>
        </fromOperator>
        <fileType>ORDR</fileType>
        <messageCount>0006</messageCount>
        <timeSent>
            <time>16:30:01</time>
        </timeSent>
        <dateSent>
            <date>2006-09-01</date>
        </dateSent>
    </header>
    <npChange orderNr="O00000003" sequenceNr="2">
        <recipientOperator>
            <operatorID>212</operatorID>
        </recipientOperator>
        <losingOperator>
            <operatorID>202</operatorID>
        </losingOperator>
        <newPortDate>
            <date>2003-05-09</date>
        </newPortDate>
        <newPortTime>
            <time>11:30:00</time>
        </newPortTime>
    </npChange>
    <cpsProvide orderNr="O00000012" sequenceNr="1" cpsServiceType="both" complexOrder="no" pre="true">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <cscCode>1012</cscCode>
        <serviceContractOwner>
            <ownerSurname>Peter</ownerSurname>
            <ownerFirstName>Bondra</ownerFirstName>
        </serviceContractOwner>
        <installationAddress>
            <housenumberA>12</housenumberA>
            <housenumberB/>
            <streetName>Keplerova</streetName>
            <city>Praha</city>
            <citySection/>
            <district>Praha 6</district>
            <postCode>118 00</postCode>
        </installationAddress>
        <customerReferenceNumber>0123456789</customerReferenceNumber>
        <callingLineID>123123123</callingLineID>
    </cpsProvide>
    <npProvide orderNr="O00000013" sequenceNr="1" npServiceType="geog" complexOrder="yes" hasLLU="true">
        <recipientOperator>
            <operatorID>212</operatorID>
        </recipientOperator>
        <losingOperator>
            <operatorID>202</operatorID>
        </losingOperator>
        <serviceContractOwner>
            <ownerCompanyName>ABC Consult</ownerCompanyName>
        </serviceContractOwner>
        <installationAddress>
            <housenumberA/>
```

```
            <housenumberB>3</housenumberB>
            <streetName>Sokolovská</streetName>
            <city>Praha</city>
            <district>Praha 2</district>
        </installationAddress>
        <customerReferenceNumber>0121212122</customerReferenceNumber>
        <directoryNumber>123123124</directoryNumber>
        <directoryNumber>123123125</directoryNumber>
        <directoryNumber>123123126</directoryNumber>
        <portActivationDate>
            <date>2003-05-09</date>
        </portActivationDate>
        <portActivationTime>
            <time>10:00:00</time>
        </portActivationTime>
    </npProvide>
    <cpsProvide orderNr="O00000014" sequenceNr="1" cpsServiceType="both" complexOrder="yes">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <cscCode>1012</cscCode>
        <serviceContractOwner>
            <ownerSurname>Peter</ownerSurname>
            <ownerFirstName>Bondra</ownerFirstName>
        </serviceContractOwner>
        <installationAddress>
            <housenumberA>12</housenumberA>
            <housenumberB>100</housenumberB>
            <streetName>Keplerova</streetName>
            <city>Praha</city>
            <citySection>Pohořelec</citySection>
            <district>Praha 6</district>
            <postCode>118 00</postCode>
        </installationAddress>
        <customerReferenceNumber>0123456789</customerReferenceNumber>
        <callingLineID>1231233</callingLineID>
    </cpsProvide>
    <npReturnNumber orderNr="O00000019" sequenceNr="1">
        <recipientOperator>
            <operatorID>212</operatorID>
        </recipientOperator>
        <donorOperator>
            <operatorID>202</operatorID>
        </donorOperator>
        <directoryNumber>222111222</directoryNumber>
        <serviceDisconnectionDate>
            <date>2003-04-17</date>
        </serviceDisconnectionDate>
        <serviceDisconnectionTime>
            <time>10:00:00</time>
        </serviceDisconnectionTime>
    </npReturnNumber>
    <preProvide orderNr="O00000015" sequenceNr="1" cpsServiceType="both" complexOrder="yes">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <cscCode>1012</cscCode>
        <serviceContractOwner>
            <ownerSurname>Peter</ownerSurname>
            <ownerFirstName>Bondra</ownerFirstName>
        </serviceContractOwner>
        <installationAddress>
            <housenumberA>12</housenumberA>
            <housenumberB>100</housenumberB>
            <streetName>Keplerova</streetName>
            <city>Praha</city>
            <citySection>Pohořelec</citySection>
            <district>Praha 6</district>
            <postCode>118 00</postCode>
        </installationAddress>
        <customerReferenceNumber>0123456789</customerReferenceNumber>
        <callingLineID>1231233</callingLineID>
    </preProvide>
</orderFile>
```

12.2 RSLT

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE resultFile PUBLIC "" "np_cps.dtd">
<resultFile>
    <header>
        <toOperator>
            <operatorID>212</operatorID>
        </toOperator>
        <fromOperator>
            <operatorID>202</operatorID>
        </fromOperator>
        <fileType>RSLT</fileType>
        <messageCount>0007</messageCount>
        <timeSent>
            <time>16:45:01</time>
        </timeSent>
        <dateSent>
            <date>2006-09-05</date>
        </dateSent>
    </header>
    <npReject orderNr="O00000003" sequenceNr="2" refSequenceNr="2">
        <recipientOperator>
            <operatorID>212</operatorID>
        </recipientOperator>
        <losingOperator>
            <operatorID>202</operatorID>
        </losingOperator>
        <rejectionCode>L007</rejectionCode>
        <rejectionDescription>npChange received too late</rejectionDescription>
    </npReject>
    <npAbort orderNr="O00000003" sequenceNr="3">
        <recipientOperator>
            <operatorID>212</operatorID>
        </recipientOperator>
        <losingOperator>
            <operatorID>202</operatorID>
        </losingOperator>
    </npAbort>
    <cpsAccept orderNr="O00000012" sequenceNr="1" refSequenceNr="1">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
    </cpsAccept>
    <cpsReject orderNr="O00000013" sequenceNr="1" refSequenceNr="1">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <rejectionCode>C003</rejectionCode>
        <rejectionDescription>Number not subjected to CPS</rejectionDescription>
    </cpsReject>
    <preReject orderNr="O00000015" sequenceNr="1" refSequenceNr="1">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <rejectionCode>C003</rejectionCode>
        <rejectionDescription>Number not subjected to CPS</rejectionDescription>
    </preReject>
    <cpsActivated orderNr="O00000016" sequenceNr="2">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <callingLineID>582396118</callingLineID>
    </cpsActivated>
    <preActivated orderNr="O00000017" sequenceNr="1">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <callingLineID>582396118</callingLineID>
```

```
    </preActivated>
</resultFile>
```

12.3 VLDT

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE validateFile SYSTEM "np_cps.dtd">
<validateFile>
    <header>
        <toOperator>
            <operatorID>202</operatorID>
        </toOperator>
        <fromOperator>
            <operatorID>255</operatorID>
        </fromOperator>
        <fileType>VLDT</fileType>
        <messageCount>0002</messageCount>
        <timeSent>
            <time>08:47:11</time>
        </timeSent>
        <dateSent>
            <date>2003-04-18</date>
        </dateSent>
    </header>
    <npReject orderNr="O00000007" sequenceNr="1" refSequenceNr="1">
        <recipientOperator>
            <operatorID>202</operatorID>
        </recipientOperator>
        <losingOperator>
            <operatorID>255</operatorID>
        </losingOperator>
        <rejectionCode>F001</rejectionCode>
        <rejectionDescription>Mandatory field missing</rejectionDescription>
        <rejectionParameter>npProvide/directoryNumber</rejectionParameter>
    </npReject>
     <preReject orderNr="O00000015" sequenceNr="1" refSequenceNr="1">
        <cpsOperator>
            <operatorID>212</operatorID>
        </cpsOperator>
        <rejectionCode>C003</rejectionCode>
        <rejectionDescription>Number not subjected to CPS</rejectionDescription>
    </preReject>
</validateFile>
```

12.4 FLAC

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE acknFile SYSTEM "np_cps.dtd">
<acknFile>
    <header>
        <toOperator>
            <operatorID>255</operatorID>
        </toOperator>
        <fromOperator>
            <operatorID>202</operatorID>
        </fromOperator>
        <fileType>FLAC</fileType>
        <messageCount>0002</messageCount>
        <timeSent>
            <time>08:45:00</time>
        </timeSent>
        <dateSent>
            <date>2003-04-18</date>
        </dateSent>
    </header>
    <fileAccept refType="ORDR">
        <refTimeSent>
            <time>16:31:34</time>
        </refTimeSent>
```

```
        <refDateSent>
            <date>2003-04-17</date>
        </refDateSent>
    </fileAccept>
    <fileReject refType="RSLT">
        <refTimeSent>
            <time>16:31:39</time>
        </refTimeSent>
        <refDateSent>
            <date>2003-04-17</date>
        </refDateSent>
        <rejectionCode>X001</rejectionCode>
        <rejectionDescription>XML not well formed or DTD error</rejectionDescription>
    </fileReject>
</acknFile>
```

12.5 FILE SAMPLES


sample_ORDR.xml


sample_RSLT.xml

13 APPENDIX J: SOAP Message

13.1 Request

```
<?xml version='1.0' encoding='UTF-8'?>
<SOAP-ENV:Envelope
        xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/'
        xmlns:SOAP-ENC='http://schemas.xmlsoap.org/soap/encoding/'
xmlns:xsi='http://www.w3.org/1999/XMLSchema-instance' xmlns:xsd='http://www.w3.org/1999/XMLSchema'>
    <SOAP-ENV:Body>
        <ns0:send
                xmlns:ns0='urn:ReceiveMessaging'
                SOAP-ENV:encodingStyle='http://schemas.xmlsoap.org/soap/encoding/'>
            <ns0:arg0 xsi:type='xsd:string'>
                [XML file content]
            </ns0:arg0>
            <ns0:arg1 xsi:type='xsd:string'>ORDR</ns0:arg1>
        </ns0:send>
    </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

13.2 Response

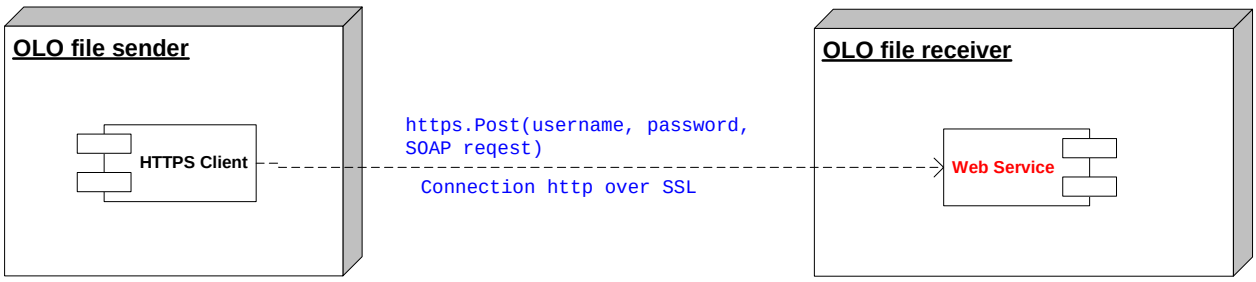
```
<?xml version='1.0' encoding='UTF-8'?>
<SOAP-ENV:Envelope
        xmlns:SOAP-ENV='http://schemas.xmlsoap.org/soap/envelope/'
        xmlns:SOAP-ENC='http://schemas.xmlsoap.org/soap/encoding/'
        xmlns:xsi='http://www.w3.org/1999/XMLSchema-instance' xmlns:xsd='http://www.w3.org/1999/XMLSchema'>
    <SOAP-ENV:Body>
        <ns0:sendResponse
                xmlns:ns0='urn:local'
                SOAP-ENV:encodingStyle='http://schemas.xmlsoap.org/soap/encoding/'>
            <ns0:return xsi:type='xsd:string'>0</ns0:return>
        </ns0:sendResponse>
    </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

14 Appendix K: WSDL

```
<definitions
        targetNamespace="[target namespace URI]"
        xmlns="http://schemas.xmlsoap.org/wsdl/"
        xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
        xmlns:tns="[tns namespace URI]"
        xmlns:xsd="http://www.w3.org/1999/XMLSchema"
        xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/">
    <types>
        <schema
            targetNamespace='[target namespace URI]'
            xmlns='http://www.w3.org/1999/XMLSchema'>
        </schema>
    </types>
    <message name="sendRequest">
        <part name="arg0" type="xsd:string" />
        <part name="arg1" type="xsd:string" />
    </message>
    <message name="sendResponse">
        <part name="return" type="xsd:string" />
    </message>
    <portType name="ReceiveMessagingPortType">
        <operation name="send">
            <input message="tns:sendRequest"/>
            <output message="tns:sendResponse"/>
        </operation>
    </portType>
    <binding name="ReceiveMessagingBinding" type="tns:ReceiveMessagingPortType">
        <soap:binding style="rpc" transport="http://schemas.xmlsoap.org/soap/http"/>
        <operation name="send">
            <soap:operation soapAction="urn:send"/>
            <input>
                <soap:body
                        use="encoded"
                        namespace='urn:ReceiveMessaging'
                        encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"/>
            </input>
            <output>
                <soap:body
                        use="encoded"
                        namespace='urn:ReceiveMessaging'
                        encodingStyle="http://schemas.xmlsoap.org/soap/encoding/"/>
            </output>
        </operation>
    </binding>
    <service name="ReceiveMessaging">
        <documentation>todo</documentation>
        <port name="ReceiveMessagingPort" binding="tns:ReceiveMessagingBinding">
            <soap:address location="[Web service URL]"/>
        </port>
    </service>
</definitions>
```

15 APPENDIX L: General description of communication between OLOs

Terms and definitions
Web Service is a web application page where client POSTs the request.
Client connects to server using *http over SSL* - all data are encrypted during transfer.



General description of communication

Client sends to the server username, password in http header. Authentication is performed on http level and authentication type is basic. These authentication data are sent together with SOAP request in one POST request. Because of security reasons the client must know authentication realm name on server side.

If authentication is successful, the SOAP Request is handed over and processed. SOAP Response is created by server and returned to the client. The response contains Response code (string). The values of this response are as follows:

0 - OK
1 The message type does not match the documentation
2 - Out of business hours (see deadline rules)
3 - error while processing a message
4 - Bad user or password
5 - The message content xml is not well formed
6 - Combination of OLO_ID and login name is not valid

Deadline rules:

- files that transfer will be **started** till defined deadline (18.00) will be processed in business day of receiving file. „Master“ time is time on the server side not on the client.
- files that transfer will be **started** after defined deadline (18.00) will be rejected