Positive Payment System (PPS)

Interface File Specification

2nd November 2023

Version 1.19

MAIN CHANGE SHEET

- **Main Change Sheet.**
This section tracks all the changes in the document.

Rev	Date	Description of Change
Rev 1	10th September 2015	- Initial
Rev 2	04th December 2015	-Added Reject Reason sheet in Appendix 1.1.5
Rev 3	15 February 2016	-Updated Reject Reason sheet in Appendix 1.1.5 -Updated File Format for CSV and XML Appendix 1.1.3.1, 1.1.3.3, 1.1.4
Rev 4	19th February 2016	- Length and format changes for Serial number, SAN and Cheque issue date
Rev 6	31st May 2016	Added 3 optional fields in the CIIF file – Section 1.1.3.3 and 1.1.4
Rev 7	30th June 2016	Added format for CIIF file in CSV format under Appendix 1.1.2 Added note in section 1.1.4 for order sequence of CSV fields
Rev 8	07th July 2016	Appendix 1.1.3.3 Changed the field name from Lowercase to Uppercase
Rev 9	11th August 2016	Appendix 1.1.3.3 and 1.1.4 Changed the description for Payeeaccno and Payeename Appendix 1.1.1 Updated the File Name convention section B2 – Included the default version details for CSV Appendix 1.1.3.1 Updated the CIIF Root Section – Updated the default value for attribute "Version"
Rev 10	11th August 2016	Appendix 1.1.5.1.2 Added new reject reason 4 / 5
Rev 11	25th August 2016	Appendix 1.1.5.1.2 Added new reject reason 4 / 6 Appendix 1.1.5.1.1 Changed the field name from Lowercase to Uppercase
Rev 12	28th June 2017	Appendix 1.1.5.1.4 and 1.1.5.1.5 Updated Field name from Lowercase to Uppercase in sample
Rev 12	12th July 2017	Appendix 1.1.2 File Structure – modified the Additional fields outer line and changed description for optional

		Appendix 1.1.2 section A1 Changed Optional description
Rev 13	18th Feb 2019	Changed the Description for PayeeName in Appendix 1.1.3.3 and 1.1.4
Rev 14	01st July 2019	Appendix 1.1.3.3 and 1.1.4 Changed the Value for Payeeaccno (added acceptable character set) Changed the type to AN from NS
Rev 15	20th Dec 2019	Appendix 1.1.3.3 Included the following allowable characters for draweebankname - a-z,A-Z,0-9
Rev 15	23rd June 2020	Appendix 1.1.5.1.2 Updated reject reason description for reason 4 / 2
Rev 16	09th Oct 2020	Word CPPS has been changed to PPS across document as per NPCI's Request over mail dated 09th Oct 2020
Rev 17	13th Nov 2020	Appendix 1.1.3.3 Updated SAN to Mandatory from Optional as per NPCI's request over mail dated 13th Nov 2020. Added comments for the same.
Rev 17	13th Nov 2020	Appendix 1.1.4 Updated SAN to Mandatory from Optional as per NPCI's request over mail dated 13th Nov 2020. Added comments for the same.
Rev 17	13th Nov 2020	Appendix 1.1.3.3 Updated description of Optional2 as per NPCI's request over mail dated 13th Nov 2020. Added comments for the same.
Rev 17	13th Nov 2020	Appendix 1.1.4 Updated description of Optional2 as per NPCI's request over mail dated 13th Nov 2020. Added comments for the same.
Rev 18	08th Dec 2020	Appendix 1.1.3.1 FileID Type changed to NS from AN, Added default value for FileID.
Rev 18	08th Dec 2020	Appendix 1.1.5 Added fileid < f > in the file name for response file
Rev 18	08th Dec 2020	Appendix 1.1.3.3 and 1.1.1 Updated Description for DraweeBranchRoutingNo
Rev 18	17th Dec 2020	Appendix 1.1.3.3 Updated Payeename to Mandatory from Optional as per NPCI's request over mail dated 12th Dec 2020. Added comments for the same. Changed the default value for SAN to "000000" from "999999"

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Rev 18	17th Dec 2020	Appendix 1.1.4 Updated Payeename to Mandatory from Optional as per NPCI's request over mail dated 12th Dec 2020. Added comments for the same. Changed the default value for SAN to "000000" from "999999"
Rev 18	29th July 2021	Appendix 1.1.3.3 and 1.1.3.4 Updated Special conditions for fields with "AN" field types to restrict data with Pre and Post blank spaces.
Rev 19	2nd Nov 2023	Updated section Appx 1.1.5.1.1, Appx 1.1.5.2.2 and Appx 1.1.5.1.4 for adding Description field in CIIF response file

Note: This document has the following change sheet section.

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1 Interface with PPS Enabled Banks System

Appx 1.1   PPS ITEM INPUT FILE (CIIF)

CIIF files are file contain items which the Banks want to perform validation against. These files can be in

1. XML format
2. CSV format

One CIIF File will contain a group of items (typically 250 items) for the same bank. The bank may present more than one CIIF file at any time.

The format of the same are explained below:

Appx 1.1.1 File Name Convention

B1	The CIIF File name shall use the following naming convention: CIIF_ DraweeBranchCode_FileId.xml where: **CIIF** PPS **I**TEM **I**NPUT **F**ILE. This is a mandatory prefix for any CIIF file. **DraweeBranchCode** -- Routing number of the Drawee Bank / Branch (*Drawee bank / branch routing number in header of CIIF Root should match with routing number present in the file name.* **FileId** -- File ID **.xml** -- Is a mandatory file type suffix
B2	CIIF files can also be sent in CSV format. The filename for CSV's will be CIIF_ *DraweeBranchCode_FileId_Version*.csv where: **CIIF** PPS **I**TEM **I**NPUT **F**ILE. This is a mandatory prefix for any CIIF file. **DraweeBranchCode** -- Routing number of the Drawee Bank / Branch **FileId** -- File ID **Version** -- Defines the version of the CSV for validation. Different versions may have different set of columns in the CSV. *(Default value "1.0")* **.csv** -- Is a mandatory file type suffix

Appx 1.1.2 File Structure

CPPS Input Item File Structure
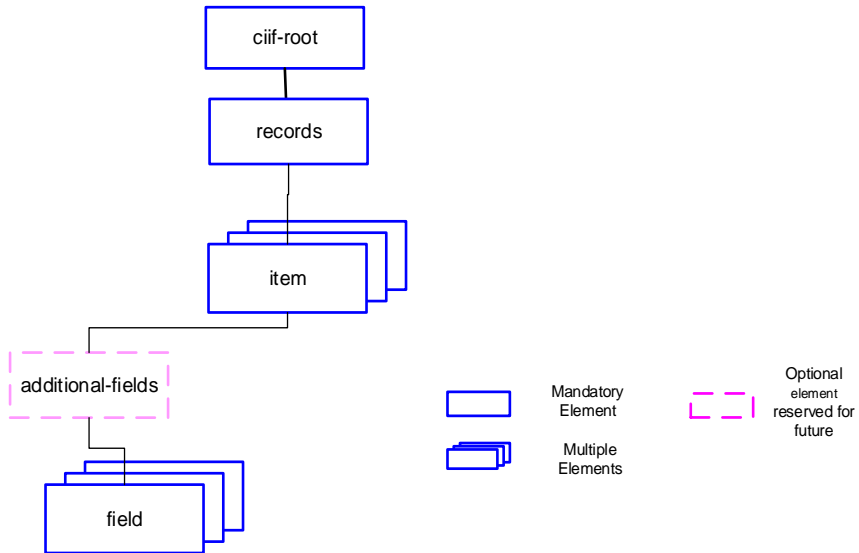
A1	The PPS Item Input File structure shall be: *<ciif-root … >* *<records … >* *<item … >* *[<additional-fields>* *<field….>* *…* *</additional-fields>]* *</item>* *…* *</records>* *</ciif-root>*
	Elements "ciif-root", "records", "item" are mandatory. Tags in [] are Optional as of now and reserved for future.

A sample CIIF file is shown below (XML Format):

```xml
<?xml version="1.0" encoding="utf-8"?>
<ciif-root Version="1.0" Fileid="1" Testfileindicator="P"
draweebranchroutingno="110011111">
     <records>
         <item payeeaccno="123456789" serialno="000001" issue-
date="15012015" amount="1500" transcode="123" draweebankname="State Bank of
India" draweebranchroutingno="110101111" payeename="Mr. Adesh Shah"
san="1235437" >
         <item payeeaccno="123456789" serialno="324548" issue-
date="26022016" amount="1200" draweebankname="State Bank of India"
draweebranchroutingno="110011111" san="123453" />
     </records>
</ciif-root>
```

A sample CIIF file is shown below (CSV Format):

```
PayeeAccountNumber,SerialNumber,IssueDate,Amount,Transactioncode,DraweeBankNa
me,DraweeBranchRoutingNumber,PayeeName,San,Optional1,Optional2,Optional3
50011,011231,14042016,390587,10,HDFC Bank,110240001,Xyz abc,123456,,,
50211,011232,14042016,150000,10,HDFC Bank,110240002,Xyz abc,123456,,,
```

Appx 1.1.3 CIIF XML Elements and Attributes

Appx 1.1.3.1 ciif-root

This is the root node of the XML file. It has the following attributes

Attributes of ciif-root

Attribute Name	Description/ Format	Value (default)	Type	Size		Usage
				Min	Max	
Version	Version of this Interface definition–	1.0	N	1.2	3.2	M
Fileid	Running number to uniquely identify the file.	Must be greater than 0	NS	1	10	M
Draweebranchroutingno	Routing number of the drawee Bank / Branch. *(Drawee bank / branch routing number in header of CIIF Root should match with routing number present in the file name.)*		NS	9	9	M

Attribute Name	Description/ Format	Value (default)	Type	Size		Usage
				Min	Max	
Testfileindicator	Production / Testing file indicator	Must be "P"	A	1	1	M

Appx 1.1.3.2 Records

This element has no attributes and is a holder element of items.

Appx 1.1.3.3   Item

Note: The field's combination below form a unique item. Repetition of the same will lead to item duplication.

<serialno>< draweebranchroutingno >< amount>

Attributes of ItemAttribute Name	Description/ Format	Value (default) Special Condition	Type	Size		Usage
				Min	Max	
payeeaccno	Account Number of the Drawer	Should allow following special characters a-z,A-Z,0-9,_(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	25	M
serialno	Instrument number	*Must be greater than 0.* *Should be zero padded to match the length*	NS	6	6	O
issue-date	Instrument Date	*Date should be in DDMMYYYY format* Should not be older than 90 days	NS	8	8	M
amount	Amount		N	1	18	M
transcode	Transaction Code		NS	2	3	M

Attributes of Item*Attribute Name*	Description/ Format	Value (default) *Special Condition*	Type	Size		Usag e
				Min	*Max*	
draweebankname	Drawee Bank Name	Should allow following special characters a-z,A-Z,0-9,_(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	O
draweebranchroutingno	Routing number of the drawee branch	*Must be greater than 0*	NS	9	9	M
payeename	Name of the Payee	Should allow following special characters a-z,A-Z,0-9,_(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	M

| Attributes of Item*Attribute Name* | Description/ Format | Value (default) *Special Condition* | Type | Size | | Usage |
				Min	*Max*	
san	Short Account Number	*Must be greater than 0* *Should be zero padded to match the length upto 6 digits* *If SAN is available for the customer then capture when uploading the data. If SAN is not available, then capture default value as "000000"*	NS	6	7	M
optional1	Filler	Should allow following special characters a-z,A-Z,0-9,_(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	O

Attributes of ItemAttribute Name	Description/ Format	Value (default) Special Condition	Type	Size		Usage
				Min	Max	
optional2	Purpose as provided by the customer for which cheque is issued / used	Should allow following special characters a-z,A-Z,0-9, _(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	25	O
optional3	Filler	Should allow following special characters a-z,A-Z,0-9, _(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	10	O

Appx 1.1.3.4   Additional Fields

To support extension, the CIIF file supports the tag `<additional-fields>` which has no attributes. It has child elements <field>.

Appx 1.1.3.5 Field

The field tag has following attributes:

Attributes of Item*Attribute Name*	Description/ Format
Name	User defined
Value	User defined

The validation of CIIF containing variable data represented by additional-fields tag MUST be supported by XSD provided by the bank which can validate the contents of such name-value pair represented by the `<field>` tag.

Appx 1.1.4 Format for CSV file

The CIIF file in CSV format shall contain the following heading fields. Each field must be separated by ,(comma).

Column Heading	Description/ Format	Value (default) *Special Condition*	Type	Size		Usage
				Min	*Max*	
payeeaccountnumber	Account Number of the Drawer	Should allow following special characters a-z,A-Z,0-9,_(underscore), blank space,'(apostrophe), comma, full stop Space shall not be allowed as the first character and/or last character.	AN	1	25	M
serialnumber	Instrument number	*Must be greater than 0.* *Should be zero padded to match the length*	NS	6	6	M

| Column Heading | Description/ Format | Value (default)
Special Condition | Type | Size | | Usage |
				Min	*Max*	
issuedate	Instrument Date	*Date should be in DDMMYYYY format* Should not be older than 90 days	NS	8	8	M
amount	Amount		N	1	18	M
transactioncode	Transaction Code		NS	2	3	M
draweebankname	Drawee Bank Name	Should allow following special characters A-Z,a-z,0-9, _(underscore), blank space,'(apostrophe), comma[1], full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	O
draweebranchroutingnumber	Routing number of the drawee branch	*Must be greater than 0*	NS	9	9	M

| Column Heading | Description/ Format | Value (default) Special Condition | Type | Size | | Usage |
				Min	Max	
payeename	Name of the Payee	Should allow following special characters A-Z,a-z,0-9,_ _(underscore), blank space,'(apostrophe), comma[1], full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	M
san	Short Account Number	*Must be greater than 0* *Should be zero padded to match the length upto 6 digits* *If SAN is available for the customer then capture when uploading the data. If SAN is not available, then capture default value as "000000"*	NS	6	7	M

Column Heading	Description/ Format	Value (default) *Special Condition*	Type	Size		Usage
				Min	*Max*	
optional1	Filler	Should allow following special characters A-Z,a-z,0-9,_ _(underscore), blank space,'(apostrophe), comma[1], full stop Space shall not be allowed as the first character and/or last character.	AN	1	50	O
optional2	Purpose as provided by the customer for which cheque is issued / used	Should allow following special characters A-Z,a-z,0-9,_ _(underscore), blank space,'(apostrophe), comma[1], full stop Space shall not be allowed as the first character and/or last character.	AN	1	25	O

Column Heading	Description/ Format	Value (default) Special Condition	Type	Size		Usage
				Min	Max	
optional3	Filler	Should allow following special characters A-Z,a-z,0-9,_ _(underscore), blank space,'(apostrophe), comma[1], full stop Space shall not be allowed as the first character and/or last character.	AN	1	10	O

[1] -- *field having character "comma ," in value should be enclosed within " "(double quotes).*

Note: All the column Headers are mandatory. In case of blank or null fields, values should be presented as null with comma separator.

The order of the fields should be as mentioned below:

PayeeAccountNumber,SerialNumber,IssueDate,Amount,Transactioncode,DraweeBankName,DraweeBranchRoutingNumber,PayeeName,San,Optional1,Optional2,Optional3

Appx 1.1.5 Response files

PPS must output Response file in the same format as Input file format i.e if XML CIIF file was presented then RES file must be in XML format.

B1	The CIIF Response File name shall use the following naming convention:

 CIIF_ DraweeBranchCode_<FileId>. <Typeoffile>.<f>.RES

where:

 CIIF -- PPS ITEM INPUT FILE. This is a mandatory prefix for any CIIF file.

 DraweeBranchCode -- Routing number of the drawee Bank / Branch

 FileId -- File ID

 Typeoffile -- Is a mandatory file type suffix. Type of CIIF files presented (XML or CSV)

 <f> -- Is file id of the Response file. This is unique for a particular CIIF file as there

 can be multiple Response files

 .RES -- is a mandatory file suffix for the Response file |
| | |

The attribute **filestatus** can be one among

```
0 – File accepted.

1 – Entire file rejected due to format inconsistencies.

4 – Item level rejection.
```

Appx 1.1.5.1 For XML response files the format is:

A1	The PPS Item Input File Response file structure shall be:
<ciif-response … *>*
<records … >
<item … >
[<additional-fields>
<field….>
…
</additional-fields>]
</item>
…
</records>
</ciif-response >

Appx 1.1.5.1.1   ciif-response

Attribute Name	Description/ Format	Value (default)	Type	Size		Usage
				Min	Max	
version	Version of this Interface definition		N	1.2	3.2	M
Fileid	Running number to uniquely identify the file.		AN	1	10	M
Filestatus	Status of the file whether accepted = 0, File Level Rejection=1 or Item Level rejection=4		N	1	1	M
Description	Reason for file level rejection		AN	1	250	O

Appx 1.1.5.1.2   *Reject Reason*

In case of Item Level Rejection, the XML structure must include all the rejected items in the same XML tag format as in the CIIF input file format except that each item will carry an extra attribute "rejectreason". The value of rejectreason is mapped in PPS database and is to be decided by the PPS design based on what was the reason for rejection.

The following chart provides Status Code and Reject Reason code.

FILE STATUS (CODE)	FILESTATUS (DESCRIPTION)	REJECT REASON (CODE)	Error Resolution to be done by Bank
0	File Loaded successfully and All items passed validation at CHI	N.A.	N.A.
1	Invalid file format	N.A.	Rectify File format as per IFS and resubmit the file with a new file name. Possible errors include: - content failures as a result of XSD validation - items with Clearing Type other than stated in filename
2	Invalid file name format	N.A.	Rectify file naming convention as per IFS and resubmit the file with a new file name
3	Duplicate file	N.A.	File with similar name is already uploaded in the system
4	Items Rejected	1	Duplicate instruments – Instrument already available in system
4	Items Rejected	2	Incorrect Drawee Bank / Branch code – Drawee Bank / Branch does not match with the masters
4	Items Rejected	3	Already Paid instrument -Instrument already available with Presentment flag
4	Items Rejected	4	Stale cheque
4	Items Rejected	5	Wrongly presented item *(Draweebranchroutingno for the item does not belong to Draweebank mentioned in the filename)*
4	Items Rejected	6	Items deleted by Bank / Branch

Thus a sample <item> tag will look like:

```
<item payeeaccno="123456789" serialno="000001" issue-date="15022016" amount="1500"
transcode="123" draweebankname="State Bank of India"
draweebranchroutingno="110101111" payeename="Mr. Adesh Shah" san="1235437"
rejectreason="1"/>
```

Appx 1.1.5.1.3   Incase of Successful items

```
<?xml version="1.0" encoding="UTF-8"?>

<ciif-response version="1.0" Fileid="1" Filestatus="0"/>
```

Appx 1.1.5.1.4   Incase of File Level rejection

```
<?xml version="1.0" encoding="UTF-8"?>



<ciif-response version="1.0" Fileid="3058" Filestatus="1" Description="The
required attribute 'draweebankname' is missing." />
```

Appx 1.1.5.1.5   Incase of Item level rejections

```
<?xml version="1.0" encoding="UTF-8"?>

<ciif-response version="1.0" Fileid ="1" Filestatus ="4">

        <records>

                <item payeeaccno="123456789" serialno ="000001" issuedate="23012015" amount="1500"
transcode="123" draweebankname="State Bank of India" draweebranchroutingno="110101111"
payeename="Mr. Adesh Shah" san="1235436" rejectreason="1"/>

                <item payeeaccno="123456789" serialno ="000002" issue-date="03062015" amount="1200"
transcode="12" draweebankname="State Bank of India" draweebranchroutingno="110101111" payeename="Mr.
Adesh Shah" san="123543" rejectreason="2"/>

        </records>

</ciif-response>
```

Appx 1.1.5.2 CSV response file

Appx 1.1.5.2.1   Successful validation

The CSV will contain just 1 column i.e FileStatus with 1 row with value 0.

```
FileStatus

0
```

Appx 1.1.5.2.2   File rejection, the response file will contain:

```
FileStatus, Description

1, PayeeAccountNumber attribute is not as per PPS specification for SerialNo=
002110
```

Appx 1.1.5.2.3   Item level rejections

The RESponse CSV must contain the entire item details as presented to PPS along with 1 additional column at the end "Reject Reason". For example

```
PayeeAccountNumber,SerialNumber,IssueDate,Amount,Transactioncode,DraweeBankNa
me,DraweeBranchRoutingNumber,PayeeName,San,Optional1,Optional2,Optional3,Reje
ctReason
234543543,423424,05062015,1410,115,STATE BANK OF INDIA,110002000,Mumbai
Development Centre,4233228,,,,1

341432432,432324,16052015,134209,10,STATE BANK OF INDIA,110002000,Amit
Patil,534535,,,,2
```