FILIA RX Interface specification Rev20

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Contents

History

date	No.	
2011 Sep. 29th	1st	
2011 Oct. 15th	2nd	Added new item 'freeInformation' in each pouches.
2011 Nov. 4th	3rd	Put comment for patient ID, it must be unique in the same location.
2012 Jube. 15th	4th	
2013 Dec. 26th	5th	orderNo added in <drug> section
2014 Aug. 1st	6th	Added shipNumber in <basic> section. Added new print keywords.
2016 June. 21st	7th	Added groupNumber in <basic> section. Added locationId in RXA file.
2016 Nov. 14st	8th	Added numberPenColor , flagCut in <pouch> section.
2017 Sep. 21st	9th	Support multiple host Mnemonic original drug code added
2018 Nov. 16st	10th	Added some special info
2020 March 4th	11st	Added extBatchID , extRollID
2020 June 10th	12nd	Expand print max item number from 64 to 79 Machine number 0 check is allowed when you use Direct+Manul mode.
2020 Sep. 28th	13rd	Error code 0022 is deleted. When there are some print item over 79, MapleR won't treat it as error but just ignore the print item .
2020 Nov. 20	14th	Print text length check logic (error code 0021) was changed. The limitation length is 900 as Total length in one pouch.
2021 Jan. 25	15th	Changed the length of orderNumber in <patient> from 32 to 64.
2021 Feb. 12	16th	Specific BENJAMIN number is added in <basic>

2021 May. 26	17th	Character restriction for Patient order number.
2021 Nov. 5	18th	AIF added
2022 Dec. 6	19th	Web service interface / HTTPS protocol added
2023 Jan. 6	20th	flagCutAndRoll added in <pouch> section

Outline

Perpose

RX interface is prepared for prescription order information by HOST system.

This document describes how to send prescription order data to FILIA system from HOST system and its contents.

MAPLER

This interface is supported by MAPLER system in FILIA.

Web service interface

RX interface has been supported as File IO interface using xml file.

After the REV19 version, FILIA supports also Web service interface using HTTPS/HTTP protocol.

When you want to have the service you need to ask Tosho individually, basically TOSHO doesn't install the service system.

Xml file IO interface

Proceeding sending RX information data to MAPLER

Host system and MAPLER communicate by **FILE** through the SHARED FOLDER each other.

The folder is needed to be readable and writeable accessing.

RX = Prescription information data from HOST system.

RXR = Prescription information request file from HOST system.

RXA = Prescription information answer file from MAPLER.

Side HOST system

1. Before making RX file, Host system has to check an existence of RXR and RXA file in the folder.

   When the RXA file exists Host has to take it and delete it from the folder.

   When the RXR file exists (it means MAPLER is now reading files) Host system has to wait until the file is deleted by MAPLER.

   If the RXR file won't be deleted it means MAPLER is not working, Host system should make warning message.

2. When the RXR and RXA files doesn't exist, Host system can make RX data in the folder.

3. After making RX data, Host system needs to make RXR file.

4. After converted the RX file by MAPLER, you will have RXA file as a response for the RX file and at the same time RX and RXR files will be deleted.

Side MAPLER

1. While the RXA file exists, MAPLER doesn't do anything.

2. While MAPLER is working, it is watching and waiting an existence of RXR file in the folder.

   And while the RXR file doesn't exist MAPLER won't do anything.

3. When MAPLER finds the RXR file, it starts to read and convert RX data.

4. After MAPLER converted RX data, it firstly makes RXA file as an answer of conversion and deletes RX and RXR files.

Rule of RX,RXR,RXA data file name

The name of files must be as following.

RX = **FILIA_RX.xml**

RXR = **FILIA_RXR.RFS**

RXA = **FILIA_RXA.xml**

In case of multiple mode

RX = **FILIA_RX_01.xml --- FILIA_RX_99.xml**

RXR = **FILIA_RXR_01.RFS --- FILIA_RXR_99.RFS**

RXA = **FILIA_RXA_01.xml --- FILIA_RXA_99.xml**

File type of RX,RXR,RXA data

RX and **RXA** are XML form.

RXR will be used only its existence between MAPLER and HOST so the contents isn't used.

Multiple Host mode (Later MAPLER version 3.037)

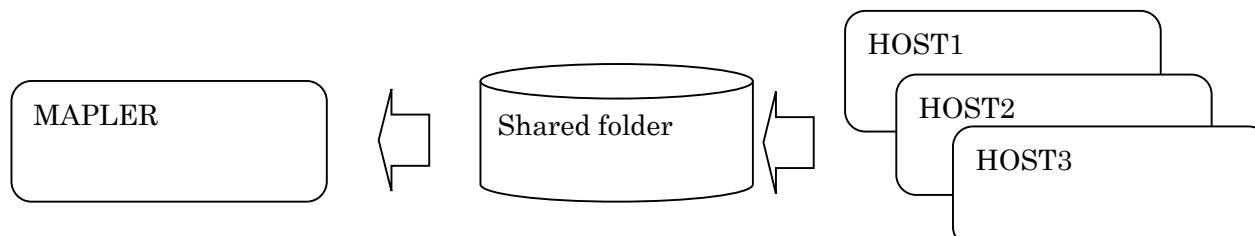In case multiple host mode, MAPLER can handle RX interface between more than one host.

The name of RX, RXR and RXA files are changed as adding branch number.

Each Host must use different branch number.

For using the multiple host mode you need to register the following information in 'setupMaster' table of FILIA SQL database by hand.

Item name	Content
systemType	0
sectionData	SETUP
itemData	RXIF_DUPHOST
setupData	1 = multiple mode use

Item name	Content
systemType	0
sectionData	SETUP
itemData	RXIF_HOST_NO
setupData	How many host systems. In case you set 3, branch number _01 , _02 and _03 can be used.

MAPLER ⇐ Shared folder ⇐ HOST1 HOST2 HOST3

Web service interface

Condition

We recommend to use Microsoft Information Interface Service (IIS) as the web server service system.

Tosho provides 'FiliaRxInterfaceService'.

This is totally up to you but for the security reason we recommend to use HTTPS protocol instead of simple HTTP protocol.

Sending order method

Host system need to use POST method to sending RX data.

```
POST /FiliaRxInterfaceService.php HTTP/1.1

Host: [server domain name]

X-Filia-User-Id:[User id]

Content-Type: application/xml

Content-Length: [length number]


[RX xml data]
```

- [User id] is provided by MapleR license file so you need to ask Tosho.
- [RX xml data] see **RX: FILIA_RX(_xx).xml data structure**.

Return value

As the response information, you will get the return value as XML text. See *RXA: FILIA_RXA(_xx).xml data structure*.

RX: FILIA_RX(_xx).xml data structure

One RX file

FILIA treats one RX file as one location (nursing home, ward in hospital …) , so if you have several patients in the same location you can set multiple patients in one RX data. The other hand, you cannot set patients who are located in different location.

XML form

Items marked (***AIF**) will be used by the function which has been supported by Mapler version 3.045 (see Mapler release note 3045-2 Additional information items for RX and RS). if you don't use this function, you can omit these items.

		Required [*1]
<?xml version="1.0" encoding="UTF-8"?>		●
<filiaServiceRequest>		●
<requestType>1</requestType>	Always set 1	●
<basic	Basic information. Always set one <basic> section in one RX file.	●
locationId="[data]"	(Max length 32) Location name.	●
shipNumber="[data]"	(Max length 32) Shipping number for the location. This information will be used for sorting order location. You can set like shipping time or just number.	
machineNumber="[data]"	**0**=FILIA allocates machine number. (**Automatic mode or Manual mode only**) **1,2,3,,,** = Order will be sent to the number of machine.	●
groupNumber="[data]"	Machine group number. 0=Not used. 1-9=Group number Ex. Group1 = Machine 1,2,3,4,5. Group2 = Machine 6,7,8,9,10 … In Automatic mode, FILIA allocates machine number using this group number.	

benjaminNumber="[data]"		1,2,3,…= You select specific Benjamin number.	
/>			●
<patient		One patient information	●
		At least one <patient> section is required. And you can set multiple <patient> section.	
	orderType="[data]"	**Always set 0**.	●
	orderNumber="[data]"	(Max 64 length) Order number. Must be unique number in all orders.	●
		This must be used from the following characters otherwise you get 0024 error.	
		'0' – '9' , 'a' – 'z' , 'A' – 'Z' , ' ' (white space) , '-' (hyphen).	
	patientId="[data]"	(Max 32 length) Patient id. **This must be unique number in the same location.**	●
	patientName="[data]"	(Max 64 length) Patient name	●
	startDate="[data]"	Intake start date. You have to set like 'YYYYMMDD'	●
	priority="[data]"	0=Normal patient 1=Priority patient *You can omit it when priority=0	
	extBatchID="[data]"	(Max 32 length) Batch id for inspection system ***You can omit it if you don't use it.**	
	extRollID="[data]"	(Max 32 length) Roll id for inspection system ***You can omit it if you don't use it.**	
	address="[data]"	(*AIF) Max = 256 characters	
	roomAndBed="[data]"	(*AIF) Max = 32 characters	
	nameNursing="[data]"	(*AIF) Max=64 characters	
	>		●
	<pouch	One pouch information	●
		At least one <pouch> section is required in one <patient>.	
	flag="[data]"	**0=**Information pouch (only print pouch)	●
		1=Dispensing pouch(print and dispensing pouch)	
	offsetDays="[data]"	***You can omit it when flag="0".**	O
		OAK will know the intake date from startDate (in the <patient> section) and this offsetDays.	
		'offsetDays=0' means the same date of startDate.	

doseTime="[data]"	***You can omit it when flag="0".** Dose time information like '00:00:00'.		○
layout="[data]"	This is pouch layout number. You can use from 1 to 8		●
freeInformation="[data]"	(Max 32 length) Not (*AIF) case This you can use as free information area and this information will be taken over to RS (dispensed result information) interface. (*AIF) case You have to set unique number for each pouches in all of your production.		
numberPenColor="[data]"	Color pen number If the machine has color pen device unit, you can use it. 0=not use color pen. 1,2,3,4 = line by each pen folder1,2,3,4. 5,6,7,8 = dot line by each pen folder1,2,3,4		
flagCut="[data]"	1=Cut pouch at the pouch position. Currently this option isn't used. You can omit it.		
flagCutAndRoll="[data]"	1=Cut and Roll by inspect machine (not cut by dispensing machine)		
>			●
<drug	One dispensing drug information **Don't set the <drug> section if flag="0" in the <pouch> section.**		○
code="[data]"	(Max 32 length) This is medicine identification code **Don't set the same medicine code in one <pouch> section.**		○

		val="[data]"	This is medicine number dispensed in one pouch. You can set this item following 2 format. <Normal figure> Number as it is. Ex. 0.5　1.5　1　10　… <Packed figure> 'F' + 3bytes integer + 2 bytes decimal Ex. F00100=1　F00150=1.5　F01000=10	O
		orderNo="[data]"	(Max 32 length) Drug order number	
		codeOrg="[data]"	(Max 32 length) When you use Mnemonic mode only. Set original drug code.	
		expire="[data]"	(*AIF) Max=8 characters　YYYYMMDD	
		desc="[data]"	(*AIF) Max=32 characters	
		doctor="[data]"	(*AIF) Max=32 characters	
		pharma="[data]"	(*AIF) Max=32 characters	
		sig="[data]"	(*AIF) Max=256 characters	
		drugName="[data]"	(*AIF) Max=64 characters	
		genericName="[data]"	(*AIF) Max=64 characters	
		reOrder="[data]"	(*AIF) Max=64 characters	
		comment1="[data]"	(*AIF) Max=200 characters	
		comment2="[data]"	(*AIF) Max=200 characters	
		comment3="[data]"	(*AIF) Max=200 characters	
		comment4="[data]"	(*AIF) Max=200 characters	
		comment5="[data]"	(*AIF) Max=200 characters	
		comment6="[data]"	(*AIF) Max=200 characters	
		/>		O
		<print	One pouch print item information	

id="[data]"	Print item number. You can use from 1 to 79.	
text="[data]"	(All <print> Total length in one <pouch> section is 900 length.)	
	Print information text for each print item.	
	Normally set print text as it is.	
	Special form:	
	@DN:[drug code]	
	If you set like "@DN:ABCDE" OAK will use drug name which is registered in FILIA drug file as the code 'ABCDE'.	
	@GFBAR	
	If you set like "@GFBAR" OAK will make MDM system barcode information.	
	@LT:[drug code]	
	If you set like "@LT:ABCDE" OAK will set current LOT number for the drug as the code 'ABCDE'.	
	@EP:[drug code]	
	If you set like "@EP:ABCDE" OAK will set current expire date for the drug as the code 'ABCDE'. Formed DD.MM.YYYY	
	@LTEP: [drug code]	
	This is the combination @LT + @EP	
	@PID	
	If you set like "@PID" OAK will set operator id.	
	@MNO	

		If you set like "@MNO" OAK will set machine number. @DINFO:[drug code] If you set like "@DINFO:ABCDE" ,OAK will set comment number 1 registered in drug master. @DINFO2:[drug code] If you set like "@DINFO2:ABCDE" ,OAK will set comment number 2 registered in drug master. @DINFO3:[drug code] If you set like "@DINFO3:ABCDE" ,OAK will set comment number 3 registered in drug master. @DINFO4:[drug code] If you set like "@DINFO4:ABCDE" ,OAK will set comment number 4 registered in drug master. @CC Print text from OAK's layout.	
		/>	
	</pouch>		●
</patient>			●
</ filiaServiceRequest>			●

＊1　　● is required item.　　○ is required item only for dispensing pouch.

Ex.

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

<filiaServiceRequest>

　<requestType>1</requestType>

　<basic locationId="LOCATION-A" machineNumber="0" />

　<patient orderType="0" orderNumber="00000001" patientId=" 10000" patientName="Tamura" startDate="20080101">

　　　　<pouch flag="0" layout="1" >

```xml
                    <print id="1" text="ABC hospital" />

                    <print id="2" text="TOSHO pharmacy" />

        </pouch>

        <pouch flag="1" offsetDays="0" doseTime="08:00" layout="2"  freeInformation="1234567890" >

                    <drug code="ABC01" val="1" />

                    <drug code="HGB01" val="0.5" />

                    <print id="1" text="Minoru Tamura" />

                    <print id="2" text="AAAAAAAAAA" />

        </pouch>

        <pouch flag="1" offsetDays="1" doseTime="10:00" layout="2"  freeInformation="1234567890" >

                    <drug code="ABC01" val="1" />

                    <print id="1" text="Minoru Tamura" />

                    <print id="2" text="AAAAAAAAAA" />

        </pouch>

        :

        :

</patient >

<patient orderType="0" orderNumber="00000002" patientId=" 20000" patientName="KK" startDate="20080101">

            :

</patient >

:

:

:

</filiaServiceRequest>
```

RXA: FILIA_RXA(_xx).xml data structure

XML form

<?xml version="1.0" encoding="UTF-8"?>	
<filiaServiceResponse>	
<requestType>1</requestType>	Always 1.
<result	Set result code.
code="[data]"	In case it is ok, then set 0000.
message="[data]"	Message will be set depend on the code
locationId="[data]"	LocationId
shipNumber="[data]"	Ship number
/>	
</ filiaServiceResponse >	

Code list

Code	Message	Supplement	File io	Web sv
0000	All orders have been registered successfully.			
0001	(SQL query error message)	When SQL query error occurs, set the error message.		
0002	Invalid location ID.	<basic locationId> is not set.		
0003	Invalid machine number.	<basic machineNumber> is not from 1 to 99.		
0004	Invalid order type.	<patient orderType> is not 0 and either 1.		
0005	Invalid patient ID.	<patient patientId> is not set.		
0006	Invalid patient name.	<patient patientName> is not set.		
0007	Invalid pouch type (flag).	<pouch flag>it is not 0 and either 1.		
0008	Invalid layout.	<pouch flag> it is not from 1 to 99.		

0009	LocationID:Length over	LocationId length is max 32		
0010	No patient data.	There is no <patient>.		
0011	Fail to register drug number.	Drug number working mode only. Drug number has not been registered.		
0012	No pouch data.	There is no <pouch> data in some patient.		
0013	Irregular XML.	When XML parsing error occurs.		
0014	Invalid group number.	<basic groupNumber> it is not number.		
0015	The group is not registered.	When the group number has not been setup.		
0016	Invalid group layout.	< basic groupNumber > it is not from 1 to 99.		
0017	Machine number '0' is not allowed.	When you use Direct Host Mode, you have to set specific machine number. If you use Direct+Manual mode, you can use machine number 0.		
0018	Ex. patientId:Patient item length over (wrong length value)	Data length check in <patient> section,		
0019	Ex. freeInformation:Pouch item length over (wrong length value)	Data length check in <pouch> section,		
0020	Ex. code:Drug item length over (wrong length value)	Data length check in <drug> section,		
0021	Ex. text:Print item length over (wrong length value)	Data length check in <print> section,		
~~0022~~	~~Invalid print id:you can use from 1 to 79.~~	~~Print item check~~		
0023	Invalid Benjamin number	< basic benjaminNumber > it is not number.		
0024	orderNumber:patient item character error	Order number in <patient> contains invalid character. This must be 0-9 , a-z , A-Z , ' ', '-'		
3001	Missing User id.	User id is not set in the POST message.		
3002	Invalid User id.	User id is not correct one.		

-

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

<filiaServiceResponse>

```
<requestType>1</requestType>

<result code="0000"    message="All orders have been registered successfully."    locationId="LOC" shipNumber="12345">

</filiaServiceResponse>
```