

# ILL TRANSACTION-ID: WHAT LENGTH?

At the Winchester meeting of IPIG, there was a long and inconclusive discussion on the question of defining a maximum length for the various elements of Transaction-Id. It was concluded that no decision could be made as the group lacked a clear picture on how this information was being used by current implementations.

I posted a survey on the IPIG list on March 04 1999 in a message entitled "Transaction-Id: what lengths." I received 8 responses (including one from myself for NLC), which covered 11 systems and the Canadian Standardized Profile (just for reference). In this report, I've collated the results of the survey and summarized how the elements of the Transaction-Id are used by the 8 implementors who responded to the survey.

The issue was raised by Kevin Gladwell of the British Library who was looking for a way to use the ISO ILL transaction-id within the BL legacy system, ARP. In ARP, the length of the string is restricted by space currently available on packing slips and statements or invoices. Kevin was hoping for a string not longer than 13 characters, although I recall that he had earlier indicated that up to 21 characters could be accommodated on the packing slips.

The values in the Maximum Total Length column indicates that all existing systems far exceed the maximum number of characters of space available on BL's packing slips, if the complete Transaction-Id were to be printed.

But the question was raised at the Winchester meeting whether the complete Transaction-Id was required. The Transaction-Group-Qualifier (TGQ) should be able to provide a unique string for the specific requester. Survey results indicate that this element is indexed separately by most implementors and so would be retrievable. (The one exception is PALS, which prepends it with the Transaction-Qualifier (TQ) to provide a unique key to an index.)

As to the length, the TGQ currently generated by most implementations falls within BL's length restrictions, even though most systems have defined maximum lengths which far exceed the BL's requirements.

For example, in NLC's NAVIS system, the maximum length for the TGQ is 25 characters. However, in practice, the maximum length in used for the next several decades will be 7 or 8 characters. As with many systems, the TGQ is generated by the system as an incrementing positive integer. After 12 years of generating ILL transaction numbers, NAVIS used about 1.5 million numbers. At this rate, it will be several decades before an 8-digit transaction number is generated.

OCLC, although allowing up to 50 characters, has a simpler counter generating decimal numbers for the TGQ. (Need more details on CISTI's 50 character max.)

One exception is Ameritech, which has defined a maximum length of 95 characters, to allow for the inclusion of up to 80 characters for the Requester's system-id, permitting a requester to include the full name of the requester, rather than just a library symbol. [My question to Randy is "Why not use the Initial-Requester-Id for this?"] However, the Ameritech TGQ also includes a "system-generated incrementing positive integer" (max. length 10 characters) which is separately indexed and searchable.

## SUMMARY OF CURRENT MAXIMUM LENGTHS

Implementor	System	Max. Total Length	[0] IRI	[1] TGQ	[2] TQ	[3] STQ
AG-Canada	AVISO	<b>52</b>	25	9	9	(9)
Ameritech	RSS	<b>105</b>	--	95	10	--
British Library	ARP					
Canadian Standardized Profile		<b>100 - 225</b>	25	25	25	25
CISTI	IntelliDOC	<b>50</b>	--	50	--	--
MnSCU/PALS	PALS	<b>33</b>	14	18	1	--
NLC	NAVIS	<b>215</b>	140	25	25	(25)
OCLC	OCLC Distributed Resource Sharing Software	<b>271</b>	121	50	50	(50)
OCLC	OCLC ILL System - ISO ILL interface	<b>37</b>	13	8	8	8
RLG	RLIN ILL (ISO ILL Interface)	<b>29</b>	8	17	4	--
RLG	RLG ILL Manager	<b>32</b>	8	21	3	--

### EXAMPLES OF TRANSACTION-ID AS USED BY IPIG IMPLEMENTORS:

(transaction-group-qualifier **bolded**; transaction-qualifier in *italics*)

	1234567890123456789012345678901234567890123456789012345678901234567890
	IRI <b>TGQ</b> <i>TQ</i>
BL	ABC12345
RLG	RLG:PAUG <b>99i12345</b> : <i>1</i>
NLC	OONL <b>B97003608</b> <i>PEBILL01</i>
MnSCU	MnSCU/PALS:MSU <b>MnSCU/PALS:12345670</b>
AG	OONL <b>B99001234</b> <i>B99001234</i>
Ameritech	<b>ALS:SgGH:11</b>
	<b>ALS:W:1344003400</b> <i>16</i>
	<b>ALS:University of North Central Illinois - MainCampus:1200201</b> <i>102733...</i>
OCLC ILL	AAAAAAAAAAAA <b>99999999</b> <i>99999999</i>

## MY RECOMMENDATION TO BL IS:

- Use the ISO ILL Transaction-Group-Qualifier as the printed transaction identifier within the ARP system.
- Don't worry about maximum lengths. It will take decades to reach the maximum lengths with systems that are using system-generated counters. By which time, it is hoped that ARP has been retired and a new system built that will accommodate longer strings.
- Persuade Ameritech RSS users that they have to use library symbols if they want to borrow from the British Library. If need be, parse the TGQ and disregard everything before the final colon when printing.

This would mean that we don't specify maximum lengths in the IPIG Profile, but carry some recommendations on this in the IPIG Guidelines.

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SURVEY RESULTS:

[-1] REQUESTER-ID

Implementor	System Name	Max. length	Creation	Uses	Examples
AG-Canada	AVISO	25	System generated from config. info	Identification to responder	OONL <i>See also Note 1</i>
Canadian Standardized Profile		25 for symbol; + 150 for name			
NLC	NAVIS	Institution: 20 for symbol + 120 for name; Person: 12 for symbol + 30 for name	Picked from AMICUS db table	--	Symbol: OONL Name: National Library of Canada

[0] INITIAL-REQUESTER-ID (IRI)

Implementor	System Name	Max. length	Creation	Uses	Examples
AG-Canada	AVISO	25	Copied by system from original request	Not used in DOS AVISO, but will be required for intermediary role	OONL
Ameritech	RSS	--	--	ALS does not currently support the Intermediary role. thus, an optional component & never set	--
British Library	ARP				
Canadian Standardized Profile		25 for symbol; 150 for name			
CISTI	IntelliDOC	--	--	--	--

MnSCU /PALS	PALS	14 [10+:+3]	machine-generated <name-space>:<lib symbol>. institution-symbol must be present, otherwise request is rejected.	identifies the exact library	Minnesota State University, Mankato: MnSCU/PALS:MSU Gustavus Adolphus College: MnSCU/PALS:GAC See Note 2
NLC	NAVIS	As for Requester-ID			
OCLC	OCLC Distributed Resource Sharing Software	121 [60 + colon + 60]	System is configured with tables of know system-ids for outbound requests	Indexed. Used to locate transactions corresponding to received APDU. Not printed. Not wanted.	
OCLC	OCLC ILL System - ISO ILL interface	no length restrictions	machine generated. When assigned by OCLC, it will likely have 13 characters. When a subtransaction is created, this will be whatever was sent in the original ILL-Request	Indexed. Used to locate transactions corresponding to received APDU. Not printed or wanted	--
RLG	RLIN ILL (ISO ILL Interface)	8	system	Indexed as part of transaction-id. Printed as part of transaction-id on pick slip; Barcoded and printed on pick slip for wandling	RLG:PAUG
RLG	RLG ILL Manager	8 (typical length)	system	indexed, printed and barcoded along with TGQ	RLG:PAUG

[1] TRANSACTION-GROUP-QUALIFIER (TGQ)

Implementor	System Name	Max. length	Creation	Uses	Examples
AG-Canada	AVISO	9	system-generated	<ul style="list-style-type: none"> <li>Indexed</li> <li>Included in messages</li> <li>Printed</li> </ul>	B99001234
Ameritech	RSS	95 [3+:+80+:+10]	<p>element comprised of 3 elements, separated by colons :</p> <ol style="list-style-type: none"> <li>'ALS,'hard-coded (3 char.)</li> <li>Requester's System ID, as defined by local institution (up to 80 char.)</li> <li>system-generated, incrementing positive integer (max. 10 char.)</li> </ol>	<p>element structured and indexed in such a way that it can be retrieved as a separate piece of the Transaction ID. The third element is also separately indexed and searchable.</p>	<p>ALS:SgGH:1 ALS:W:1344003400 ALS:University of North Central Illinois - MainCampus:1200201</p>
British Library	ARP				
Canadian Standardized Profile		25			
CISTI	IntelliDOC	50			
MnSCU /PALS	PALS	18 [10 + : + 7]	<p>machine-generated; local ILL transaction number appended to MnSCU/PALS</p>	<p>prepend this to the transaction qualifier and use it as a unique key to an index that we use to get our local ILL transaction number</p>	<p>MnSCU/PALS:1234567 MnSCU/PALS:7654321</p>
NLC	NAVIS	25	<p>machine-generated (length now 7 characters)</p>		<p>AM2039764 B97003608</p>

OCLC	OCLC Distributed Resource Sharing Software	50	Outbound requests have system generated decimal number (a simple counter)	Indexed used to locate transactions corresponding to received APDU Used as a local identifier of a request. As such it is printed and wanded	1, 2, 3, ...
OCLC	OCLC ILL System - ISO ILL interface	no length restrictions	Outbound requests have system generated decimal number (s simple counter). When this is assigned by OCLC, it will likely have 8 char. When a subtransaction is created, this will be whatever was sent in the original ILL-Request	Indexed (Used to locate transactions corresponding to received APDU	1, 2, 3, ...10000000
RLG	RLIN ILL (ISO ILL Interface)	17 (but unlikely to be more than 9 char.)	system	Indexed as part of transaction-id Printed as part of transaction-id on pick slip; Barcoded and pirted on pcik slip for wanding	99i123456
RLG	RLG ILL Manager	21 or fewer (typical length=less than 8)	system	Indexed Printed Barcoded along with IRI	1234567

[2] TRANSACTION-QUALIFIER (TQ)

Implementor	System Name	Max. length	Creation	Uses	Examples
AG-Canada	AVISO	9	system-generated	<ul style="list-style-type: none"> <li>Indexed</li> <li>Included in messages</li> <li>Printed on slips</li> <li>Connects incoming APDUs with correct AVISO order</li> </ul>	<ul style="list-style-type: none"> <li>B99001234</li> </ul>
Ameritech	RSS	10	system-generated, positive integer beginning with 1 and incrementing by 1 on each referral and/or retry.	Only has meaning in combination with TGQ; two components are structured and indexed in such a way that any single ILL-transaction can be differentiated from others in the ILL-transaction group	<ul style="list-style-type: none"> <li>1</li> <li>16</li> <li>10227332132</li> </ul>
British Library	ARP				
Canadian Standardized Profile		25			
CISTI	IntelliDOC	--	--	--	--
MnSCU /PALS	PALS	1	machine-generated	concatenated to transaction group qualifier to make a unique key to an index that is used to get local ILL transaction number	0 1
NLC	NAVIS	25	assigns a TQ of PEBILL001 (9 characters) to requests that have been created by NLC from manual records	internal control only; i.e., will never communicate this number to lending partners and will never print this on external reports	PEBILL001
OCLC	OCLC Distributed Resource Sharing Software	50	Outbound requests have system generated decimal number (a simple counter)	Indexed used to locate transactions corresponding to received APDU	1, 2, 3,...

OCLC	OCLC ILL System - ISO ILL interface	no length restrictions	Outbound requests have system generated string. When this is assigned by OCLC, it will likely have 8 char. When a subtransaction is created, this will be whatever was sent in the original ILL-Request	Indexed (Used to locate transactions corresponding to received APDU)	
RLG	RLIN ILL (ISO ILL Interface)	4	system	<ul style="list-style-type: none"> <li>Indexed as part of transaction-id if RLIN ILL = responder</li> <li>Printed as part of transaction-id on pick slip if RLIN ILL = responder</li> <li>Barcoded and printed on pick slip for wandling if RLIN ILL = responder</li> </ul>	if RLIN ILL = responder** :12i if RLIN ILL = requester
RLG	RLG ILL Manager	3	system	probably will not be indexed, printed, or barcoded (still to be determined)	:12

\*\* Records in RLIN ILL have format codes; "i" is the format code for ILL. In standard RLIN ILL records, the format is: YYi##### (e.g., 99i12345). When a distributed transaction-id is transformed into an RLIN record id, the "i" will be placed at the end.

[3] SUB-TRANSACTION-QUALIFIER (STQ)

Implementor	System Name	Max. length	Creation	Uses	Examples
AG-Canada	AVISO	9	system generated	Not used in DOS AVISO, but will be required for intermediary role, with use same as TQ	B99001234
Ameritech	RSS	--	--	--	--
British Library	ARP				
Canadian Standardized Profile		25			
CISTI	IntelliDOC	--	--	--	--
MnSCU /PALS	PALS	--	--	--	--
NLC	NAVIS	25	system does not currently implement forwarding	not used	
OCLC	OCLC Distributed Resource Sharing Software	50	system does not currently implement forwarding	If contained in an inbound request: <ul style="list-style-type: none"> <li>• Indexed</li> <li>• Used in location transactions corresponding to subsequent APDU</li> </ul>	--
OCLC	OCLC ILL System - ISO ILL interface	(8) no length restrictions	Outbound requests have a system generated string that will likely have 8 characters.	<ul style="list-style-type: none"> <li>• Indexed.</li> <li>• Used to locate transactions corresponding to received APDU.</li> </ul>	
RLG	RLIN ILL (ISO ILL Interface)	--	--	--	--
RLG	RLG ILL Manager	--	--	--	--

## MORE DETAILS, COMMENTS, ETC.

**AG-Canada: Richard Wilson** wrote:

"There may be a need to use longer identifiers in the next generation AVISO. I would prefer a relatively large maximum length for each element, say 20 characters each for transaction-group-qualifier, transaction-qualifier, and sub-transaction-qualifier. Requester-id and initial-requester-id need to be at least 25 characters, or perhaps 30 to allow for prefixing the code with the domain."

**CISTI: Wanda Nowosielski** wrote:

"We currently use only 1 field from Transaction-id, the transaction-group-qualifier. On our invoices to clients, we cut this off after 50 characters. In other places in our systems, this field is longer."

**NLC: Sylvie Beland** indicated that the National Library of Canada (NLC) has processed approximately 1.5 million ILL requests during the 12 years of automation. NLC is a net borrower and NAVIS only supports the Responder role, so does not generate ILL-REQUEST APDUs. However, the internal request number could be equated with TGQ. It is a system-generated incrementing positive integer that currently has a length of 7 characters. It will likely remain at that length for several more decades.

**RLG: Linda Driver** supplied details on the ISO ILL Interface to RLIN ILL:

"The ISO ILL interface to RLIN ILL will take an RLIN ILL record id and transform it into an ISO ILL transaction-id.

"EXAMPLE:

RLIN ILL: PAUG99i12345 becomes RLG:PAUG99i12345:1 in ISO ILL

"The ISO ILL interface to RLIN ILL will take a transaction-id from a distributed system (e.g. ILL Manager) and transform it into an RLIN record id.

"EXAMPLE:

ILL Manager: RLG:PAUG12345:1 becomes PAUG12345:1i in RLIN ILL.

"There are differences as to what RLIN ILL will index, barcode and print, depending upon the role that is being played--either requester or responder.

"The actual ISO-ILL transaction-id will also be place in an RLIN field for local data numbers (LDN). This field is indexed. For transaction-ids that are too long to be accommodated in RLIN ILL, the interface will create an RLIN record id number and place the ISO ILL transactions-id in LDN. In those cases, the transaction-id will print on the pick slip, but will not be barcoded."

Linda also supplied this general note about the RLG ILL Manager:

"Total maximum length for a transaction-id generated by ILL Manager is 32 characters. The individual parts of the transaction-id may vary in length. Thus, I've specified typical lengths, as opposed to maximum lengths in the form below. The 32 limit can be changed, but is currently tied to the maximum length of the document id (RCMN) in the Ariel GEDI header."

## Notes on Specific Elements:

1: Richard Wilson, AG-Canada noted, re: **requester-id**, that in AVISO, the Original-Requester-Id, is generally the NLC or NUC code for the library, but may, in fact, be anything. Responder must be aware of ID used and have a library record for requester; but responder can create a new record when first APDU is received.

2: Alan Rykhus of MnSCU/PALS wrote on **Initial-Requester-Id**: "...In the future we will be moving to a 5 character symbol. We also send a string with the library name, but we don't need it and could suppress it if wanted. This can be very long, but should be at most 50 characters."