

# **THOUSANDS BLOCK NUMBER POOLING**

**INTERSTATE FILING 5/03**

**CONFIDENTIAL -- CINCINNATI BELL TELEPHONE  
DESTROY BY SHREDDING**

# NUMBER POOLING MODIFICATIONS

Cost Element	Description	Function	Required Modification	Part 32 Account	Gross Dollar Investment
Switch Feature -- 5E	Right-to-use fees for Number Pooling switch feature.	End-office switches	New feature -- purchased for Number Pooling.	2212	
Switch Feature -- DMS10	Right-to-use fees for Number Pooling switch feature.	End-office switches	New feature -- purchased for Number Pooling.	2212	
Switch Feature Translations	Switch programming required for Number Pooling feature.	End-office switches	Work required for new feature.	2212	
Tekelec EDR Feature	Tekelec STP feature required for Number Pooling.	Signalling transfer point	New feature -- purchased for Number Pooling.	2212	
OS/Order	OS/Order is a transaction-driven mainframe OSS system that allows users to enter, edit, complete, and selectively distribute service orders in USOC and FID format.. When service order work is completed, subsequent transactions allow the order to flow to COCRIS and customer record updates.	OSS modifications	Modified to removed NPA/NXX to one Wire Center logic and edits, to identify numbers in contaminated blocks, make data base query lookups in new Network Operation database and to add LRN FID for routing of calls.	6724	
COCRIS	COCRIS provides business office personnel with instant access to all components of the Customer Service Records (CSR). It provides pooling indicators and instructions to support the order negotiation process.	OSS modifications	Modified to remove NPA/NXX to one wire center logic. This system enhancement is also required to process the orders to port back contaminated numbers aand to manage NPA/NXX block information.	6724	
OS/Plant	Outside Plant - Mainframe database used to inventory addresses and associated cable information for service provisioning.	OSS modifications	Modified database to add new a LRN field to allow for provisioning and routing of calls.	6724	
USO	Universal Service Order carries and validates the customer data input via Service Orders to the Customer Record Database. Also translates the service order into assignment requests which it sends to outside plant assignment and/or central office assignments.	OSS modifications	Modifications were required to remove NPA/NXX logic. Modifications were also required to ensure proper processing of number pooling FIDS, to ensure proper processing of service orders.	6724	
CRDB	Customer Record Database - displays the customer service & equipment records. Used to issue orders and is updated by service order activity.	OSS modifications	Converted all customer accounts to add identify homed Location Routing Number (LRN) FID for routing of calls and to put new FID to identify telephone numbers in contaminated blocks.	6724	
SOE	Service Order Entry system - graphical user interface for entry of service orders and change orders. Front end English system to OS/Order system.	OSS modifications	Modified to removed NPA/NXX to one Wire Center tables and edits, to identify numbers in contaminated blocks and to make data base lookups in new Network Operation database.	6724	
CARE	Miscellaneous CARE(Customer Account Record Exchange) maintenance. Processes carrier-initiated PIC changes and notifies carrier of PIC changes originating at the CBT business office.	OSS modifications	Modifications were required to remove NPA/NXX to one wire center logic to enable the system to send service orders to the switches for translation.	6724	
Project Management -- IT	Basic management of project schedule, budget, and resources.	OSS modifications	Not applicable.	6724	
SAG Changes	Street Address Guide - Online mainframe OSS database which is corporate data layer for address information. SAG supports service negotiation and provisioning.	OSS modifications	Modified database to add Location Routing Number (LRN) for every street, which will facilitate the provisioning and translation for routing calls. These enhancements are required to process orders to port back contaminates.	6724	

# NUMBER POOLING MODIFICATIONS

Cost Element	Description	Function	Required Modification	Part 32 Account	Gross Dollar Investment
Control DB	Mainframe database repository for central office exchanges of CBT, with online data entry screen.	OSS modifications	Completely redesigned database to remove NPA/NXX to one Wire Center logic.	6724	
NSA	Network Service Address/Telephone Number Assignment - Supports telephone number administration functionality. Integrates OS/Order Service Order edits and completion processes and other CBT systems, achieved through pre-defined interfaces. Acts as a warehouse for storing telephone numbers that are available for assignment by Order negotiation systems.	OSS modifications	Application for TN load and administration. Database repository of all CBT telephone numbers. Used to assist in identification of blocks to be donated, Modified to identify contaminated numbers.	6724	
OS Connector	OS Connector receives service orders from service order processor. Parses the FIDs and USOCs, generates loop facility, and central office assignment requests and send order to other provisioning systems.	OSS modifications	Updated to allow CBT to be allocated blocks that are contaminated and to do look ups to new Network Ops database for routing of calls.	6724	
Net Ops DB	New database designed for Network Operations to manage and track :LRN, NPA/NXX/1000Blocks and related information. Used by OS/Connector applications for order flow-through processing. Populates mainframe OSS applications.	OSS modifications	Designed for Network Operations to manage NPA/NXX block information. Ordering systems query the database for LRN, NPA/NXX information.	6724	
Telephone Number Assignment	Management of system responsible for assigning telephone numbers to new services.	OSS modifications	10K number blocks separated into 1K number blocks; orphans identified in system and <10% contaminated blocks removed.	6724	
Documentation	Technical writer contracted to update system support information as a result of Number Pooling system changes.	OSS modifications	Not applicable.	6724	
SOA Charge (2819 numbers @ \$3 each)	Charge to port numbers from blocks with less than 10% contamination.	Shared industry costs	Not applicable.	6724	
Network Planning	Network planning and implementation.	End-office switches	Not applicable.	6212	
Line and Number Administration	Labor required to identify and port numbers from blocks with less than 10% contamination.	End-office switches	Not applicable.	6212	
NPAC Charges -- Release 3.0	NPAC software upgrade required for Number Pooling.	Shared industry costs	NPAC required upgrade.	6724	
NPAC Charges -- Release 3.1	NPAC software upgrade required for Number Pooling.	Shared industry costs	NPAC required upgrade.	6724	
Testing for NPAC Releases	Testing associated with NPAC software upgrades required for Number Pooling.	Shared industry costs	Not applicable.	6724	
NBANC Pooling Administration Fees	CBT's portion of regional pooling administration charges.	Shared industry costs	New charges.	6724	
Cost Savings					
Switch Translations	Switch programming required to end permissive dialing and implement mandatory ten-digit dialing.	End-office switches	Number Pooling has postponed the need for mandatory ten-digit dialing.	6212	
Customer Notification	Printed materials and media coverage required to notify customers about mandatory ten-digit dialing.	Miscellaneous	Number Pooling has postponed the need to notify customers about mandatory ten-digit dialing.	6613	

**NUMBER POOLING SYSTEMS and DESCRIPTIONS  
INCLUDED IN COST STUDY - Vendor Supported**

SYSTEM	DESCRIPTION	REQUIREMENT	Reason
COCRIS	COCRIS provides business office personnel with instant access to all components of the Customer Service Records (CSR). It provides pooling indicators and instructions to support the order negotiation process.	Modified to remove NPA/NXX to one wire center logic. This system enhancement is also required to process the orders to port back contaminated numbers and to manage NPA/NXX block information.	1,3
Control DB	Mainframe database repository for central office exchanges of CBT, with online data entry screen.	Completely redesigned database to remove NPA/NXX to one Wire Center logic.	2
CRDB	Customer Record Database - displays the customer service & equipment records. Used to issue orders and is updated by service order activity.	Converted all customer accounts to add identify homed Location Routing Number (LRN) FID for routing of calls and to put new FID to identify telephone numbers in contaminated blocks.	1
NSA	Network Service Address/Telephone Number Assignment - Supports telephone number administration functionality. Integrates OS/Order Service Order edits and completion processes and other CBT systems, achieved through pre-defined interfaces. Acts as a warehouse for storing telephone numbers that are available for assignment by Order negotiation systems.	Application for TN load and administration. Database repository of all CBT telephone numbers. Used to assist in identification of blocks to be donated, Modified to identify contaminated numbers.	1,2
OS/Order	OS/Order is a transaction-driven mainframe OSS system that allows users to enter, edit, complete, and selectively distribute service orders in USOC and FID format.. When service order work is completed, subsequent transactions allow the order to flow to COCRIS and customer record updates.	Modified to removed NPA/NXX to one Wire Center logic and edits, to identify numbers in contaminated blocks, make data base query lookups in new Network Operation database and to add LRN FID for routing of calls.	1,3
SAG	Street Address Guide - Online mainframe OSS database which is corporate data layer for address information. SAG supports service negotiation and provisioning.	Modified database to add Location Routing Number (LRN) for every street, which will facilitate the provisioning and translation for routing calls. These enhancements are required to process orders to port back contaminates.	1,3
SOE	Service Order Entry system - graphical user interface for entry of service orders and change orders. Front end English system to OS/Order system.	Modified to removed NPA/NXX to one Wire Center tables and edits, to identify numbers in contaminated blocks and to make data base lookups in new Network Operation database.	1,3
USO	Universal Service Order carries and validates the customer data input via Service Orders to the Customer Record Database. Also translates the service order into assignment requests which it sends to outside plant assignment and/or central office assignments.	Modifications were required to remove NPA/NXX logic. Modifications were also required to ensure proper processing of number pooling FIDS, to ensure proper processing of service orders.	3
OS/Plant	Outside Plant - Mainframe database used to inventory addresses and associated cable information for service provisioning.	Modified database to add new a LRN field to allow for provisioning and routing of calls.	3
OS/Connector	OS Connector receives service orders from service order processor. Parses the FIDs and USOCs, generates loop facility, and central office assignment requests and send order to other provisioning systems.	Updated to allow CBT to be allocated blocks that are contaminated and to do look ups to new Network Ops database for routing of calls.	3

Reason 1: To either identify, donate or receive pooled blocks.

Reason 2: To create and populate the the regional databases

Reason 3: To adapt procedures for querying DBs and for routing calls to accommodate number pooling.

**NUMBER POOLING SYSTEMS and DESCRIPTIONS  
INCLUDED IN COST STUDY - Vendor Supported**

*ATTACHMENT 2, Page 2*

<b>SYSTEM</b>	<b>DESCRIPTION</b>	<b>REQUIREMENT</b>	<b>Reason</b>
CARE - Customer Account Record Exchange	Miscellaneous CARE(Customer Account Record Exchange) maintenance. Processes carrier-initiated PIC changes and notifies carrier of PIC changes originating at the CBT business office.	Modifications were required to remove NPA/NXX to one wire center logic to enable the system to send service orders to the switches for translation.	3
<b>Internally Developed Systems</b>			
Net Ops DB	New database designed for Network Operations to manage and track :LRN, NPA/NXX/1000Blocks and related information. Used by OS/Connector applications for order flow-through processing. Populates mainframe OSS applications.	Designed for Network Operations to manage NPA/NXX block information. Ordering systems query the database for LRN, NPA/NXX information.	1,2,3

Reason 1: To either identify, donate or receive pooled blocks.

Reason 2: To create and populate the the regional databases

Reason 3: To adapt procedures for querying DBs and for routing calls to accommodate number pooling.

# NUMBER POOLING COSTS

Cost Element	2001	2002	2003	2004	2005
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## Capital

Switch Feature -- 5E	\$ -			\$ -	\$ -
Switch Feature -- DMS10	\$ -			\$ -	\$ -
Switch Feature Translations	\$ -			\$ -	\$ -
Tekelec EDR Feature	\$ -			\$ -	\$ -
	\$ -			\$ -	\$ -
<b>Total Capital</b>	\$ -	\$ 893,150	\$ 226,341	\$ -	\$ -

## Expense

OS/Order					
COCRIS					
OS/Plant					
USO					
CRDB					
SOE					
CARE					
Project Management -- IT					
SAG Changes					
Control DB					
NSA					
OS Connector					
Net Ops DB					
Telephone number Administration					
Documentation					
SOA Charge (2819 numbers @ \$3 each)					
Network Planning					
Line and Number Administration					
NPAC Charges -- Release 3.0					
NPAC Charges -- Release 3.1					
Testing for NPAC Releases					
NBANC Pooling Administration Fees					
Acct 2212 Maintenance					
<b>Total Expense</b>	\$ 166,089	\$ 948,741	\$ 553,292	\$ 11,573	\$ 7,676

## Cost Savings

Translations to remove permissive dialing	\$ -	\$ -	\$ -	\$ -	
Customer notification	\$ -	\$ -	\$ -	\$ -	
<b>Total Expense</b>	\$ -	\$ -	\$ -	\$ -	\$ 258,668

	A	B	C	D	E	F	G	H	I	J	K
1	COST CALCULATION										
2											
3		Capital Cost Factor	2001	2002	2003	2004	2005	SOURCES			
4											
5	Account 2212		\$ -	\$ 893,150	\$ 226,341	\$ -	\$ -	Attachment 3, Total Capital			
6	PW Factor		1.1568	1.0498	0.9526	0.8644	0.7844	PW Factor			
7	PW Annual Capital		-	937,595	215,612	-	-	Line 5 * Line 6			
8	Total PW Capital				\$ 1,153,206			Sum of Line 7			
9								2003	2004	2005	
10	Depreciation (Chart 1)							E8 * B10 * (2/3)	E8 * B10	E8 * B10 * (2/3)	
11	Post Tax Income (Chart 1)							E8 * B11 * (2/3)	E8 * B11	E8 * B11 * (2/3)	
12	Income Tax (Chart 1)							E8 * B12 * (2/3)	E8 * B12	E8 * B12 * (2/3)	
13	Property Tax (Chart 1)							E8 * B13 * (2/3)	E8 * B13	E8 * B13 * (2/3)	
14											
15	Total Annual Capital Costs				\$ 603,296	\$ 904,942	\$ 301,647	Sum of Line 10 to Line 13			
16	PW Factor		1.1568	1.0498	0.9526	0.8644	0.7844	PW Factor			
17	PW Annual Capital Costs				\$ 574,698	\$ 782,255	\$ 236,616	Line 15 * Line 16			
18	Total PW Annual Capital Costs				\$ 1,593,569			Sum of Line 17			
19											
20	Total Annual Expenses		\$ 166,089	\$ 948,741	\$ 553,292	\$ 11,573	\$ 7,676	Attachment 3, Total Expenses			
21	PW Factor		1.1568	1.0498	0.9526	0.8644	0.7844	PW Factor			
22	PW Annual Expenses		\$ 192,138	\$ 995,952	\$ 527,064	\$ 10,004	\$ 6,021	Line 20 * Line 21			
23	Total PW Annual Expenses				\$ 1,731,179			Sum of Line 22			
24											
25	Total PW Capital Costs + Expenses				\$ 3,324,748			E18 + E23			
26											
27	COST SAVINGS										
28	Total Annual Expenses		\$ -	\$ -	\$ -	\$ -	\$ 258,668	Attachment 3, Total Cost Savings			
29	PW Factor		1.1568	1.0498	0.9526	0.8644	0.7844	PW Factor			
30	PW Annual Expenses		\$ -	\$ -	\$ -	\$ -	\$ 202,903	Line 28 * Line 29			
31	Total PW Annual Expenses				\$ 202,903			Sum of Line 30			
32											
33	Project Cost less Cost Savings				\$ 3,121,845			E25 - E31			
34	2.0% Overhead Allocation (LNP Filing)				\$ 62,437			Line 33 * 2%			
35	Total Two Year Exogenous Cost				\$ 3,184,282			Line 33 + Line 34			

**377C Capital Cost Factors**

Levelized over 2 Years

Based on 2000 Interstate ACF

<b>Plant Category</b>	<b>Account</b>	<b>Book Dep'n</b>	<b>Post Tax Income</b>	<b>Income Tax</b>	<b>Property Tax</b>							
Digital Switching	377C											
Year	1	2	3	4	5	6	7	8	9	10	11	12
PW Factor												
PW Dep'n Factor												
Total PW Dep'n Factor												
<b>2 Year Levelized Dep'n Factor</b>												
PW Post Tax Inc Factor												
Total PW Post Tax Inc Factor												
<b>2 Year Levelized Post Tax Inc Factor</b>												
PW Income Tax Factor												
Total PW Income Tax Factor												
<b>2 Year Levelized Income Tax Factor</b>												
PW Property Tax Factor												
Total PW Property Tax Factor												
<b>2 Year Levelized Property Tax Factor</b>												
<b>2 Year 377C Capital Cost Factor</b>												

**Financial Parameters**

Study Year:	2003
Timing Convention:	Middle of Year
Tax Rate:	35.00%
Cost of Equity	
Cost of Debt	
Debt Ratio	
Before Tax Weighted Avg. Cost of Capital	11.25%
After Tax Weighted Avg. Cost of Capital	
377C Economic Life	12 years