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February 27, 2004

Honorable Deborah Taylor Tate, Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

In Re: Implementation of the Federal Communications Commission's Triennial Review Order (Nine-month Proceeding) (Hot Cuts)
Docket No 03-00526

Dear Chairman Tate:

Enclosed please find a CD-Rom and five (5) copies of Sherry Lichtenberg's testimony filed on behalf of MCImetro Access Transmission Services, Inc. and Brooks Fiber Communications of Tennessee, Inc. (collectively "MCI") in the above-referenced docket. Copies have been served on all parties of record.

Very truly yours,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

By. Jon E Hastings

JEH/th

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that on February 27, 2004 a copy of the foregoing document was served on the parties of record, via electronically, US mail or hand delivery.

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BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE

IN RE:

Implementation of the Federal	)	
Communication's Commission's	)	**DOCKET NO.**
Triennial Review Order – 9 MONTH	)	**03-00526**
PROCEEDING –HOT CUTS	)	

DIRECT TESTIMONY OF SHERRY LICHTENBERG

on behalf of

MCIMETRO ACCESS TRANSMISSION SERVICES, LLC

and

BROOKS FIBER COMMUNICATIONS OF TENNESSEE, INC.

February 27, 2004

Q. PLEASE STATE YOUR NAME, EMPLOYER AND TITLE.

A. My name is Sherry Lichtenberg. I am currently employed by MCI as Senior Manager, Operational Support Systems Interfaces and Facilities Development

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.

A. I have twenty-two years of experience in the telecommunications market, fifteen years with AT&T and seven with MCI. I joined MCI in 1996 as a member of the initial team responsible for the development of MCI's local services products, both UNE-P and facilities-based. Prior to joining MCI, I held a number of positions at AT&T, including working in the General Departments organization, where I developed methods and procedures and billing and ordering systems for use by the Bell Operating Companies and later American Bell. I was Pricing and Proposals Director for AT&T Government Markets, and Executive Assistant to the President and Staff Director for AT&T Government Markets. I also held a number of positions in Product and Project Management. My current role with MCI includes designing, managing, and implementing MCI's local telecommunications services to residential and small business customers on a mass-market basis nationwide. I support both UNE-P product development and our testing and planning for facilities based competition via UNE-L. I have testified in numerous proceedings before the FCC and state public service Authoritys including multiple state 271 proceedings, network modernization proceedings and a variety of DSL proceedings. In addition, I have worked with the MCI carrier management and contracts teams to negotiate our interconnection agreements with the incumbents.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to address hot cuts in the context of operational barriers to the deployment of mass markets UNE-loops. The discussion of operational barriers falls into two categories network operational issues and customer impacting operational issues My testimony addresses the customer impacting operational issues,.

Q: HAVE YOU PROVIDED TESTIMONY IN THE MASS MARKETS SWITCHING PROCEEDING BEFORE THE TENNESSEE REGULATORY AUTHORITY ("AUTHORITY"), DOCKET NO. 03-00491?

A Yes To date I have submitted direct and rebuttal testimony

Q. PLEASE SUMMARIZE YOUR TESTIMONY HERE.

A. After much work to develop interfaces and conquer operational problems, MCI launched residential local service in Tennessee in 2002 and now provides local service to tens of thousands of Tennessee consumers via UNE-P, the only service delivery method that has proved successful thus far in bringing local service to the mass market MCI is now evaluating a move to a UNE-L service delivery method when and where it is economically and operationally feasible, because MCI would prefer to serve these customers whenever possible over its own facilities and because it wants to provide voice and DSL service using the same network Today, installing a customer on UNE-L in mass markets volumes and transitioning from UNE-P to UNE-L are complicated and difficult processes, in

large part because of the customer impacting operational problems that I discuss below. Such problems must be understood and resolved in the context of today's multi-carrier market, both with respect to customer expectations and developing competition among carriers.

Today's customers have experienced relatively seamless migrations among long distance carriers, and increasingly among local carriers as well. They will judge their experience with UNE-L carriers by the same standards, and thus so should the Authority. Today's competitive landscape involves a number of carriers with significant consumer customer bases, so it is no longer sufficient just to consider whether BellSouth can effect a customer's initial migration from UNE-P to that same CLEC using UNE-L. Now the entire industry must be taken into account, because it is just as important that subsequent migrations from one CLEC to another be transparent to the customer Unlike the 271 process, where the primary issue was BellSouth's ability to provide competitive carriers access to the systems and processes necessary to migrate customers from retail to wholesale services, this proceeding concerns whether customers can move freely among all carriers regardless of service delivery method Competition cannot flourish unless customers can do so

In this context, the operational issues I discuss below are critical. Those issues involve the extensive manual ordering and provisioning processes and multi-carrier coordination currently required for UNE-L migration, as well as the exchange of information concerning the databases for customer service records ("CSRs"), the Local Facilities Administration and Control System ("LFACS"),

E911, the National Number Portability Administration Center ("NPAC"), the Line Information Database ("LIDB"), the Caller Name Database ("CNAM"), Directory Listing/Directory Assistance ("DL/DA"), and printed directories. I also will discuss issues that must be addressed with respect to trouble handling "Hot cuts" involve more than ordering and provisioning: the exchange of information concerning these databases and coordination in trouble handling must occur in connection with the ordering and provisioning of hot cuts so that customers do not lose service, and customer's phone numbers may be seamlessly "ported" to the carrier he or she has selected In addition to outlining these issues, I also have suggested approaches to addressing them, which should at least provide a starting point for resolution. Additional issues are certain to arise as MCI and other carriers gain experience with UNE-L, and thus the Authority will need to play a continuing role to ensure that all operational barriers to UNE-L implementation are addressed and resolved

Moving existing customers from UNE-P to UNE-L (the batch hot cut process described by the FCC) is only one small piece of the new processes that will be required to maintain the level of competition in Tennessee in a facilities-based world Even if customers who are already served by a CLEC can be transitioned to a new carrier using a batch hot cut process – what then? How will customers continue to be able to migrate among other carriers as they do today with UNE-P?

Rolling access, whereby customers were acquired via UNE-P and then transitioned to UNE-L using batch hot cuts, would not solve these operational

problems either. Rolling access would only address the initial migration from BellSouth to a CLEC, and not subsequent migrations between carriers Moreover, rolling access would not address the operational issues I discuss below; indeed, it might exacerbate such problems, since these customers must first be provisioned on one service – and receive and activate one set of features – and then be provisioned on another, with potentially different features and the need to activate them once again In the final analysis, there is no "silver bullet" that will solve all the operational problems involved in rolling out UNE-L to the mass market and particularly residential customers. As with UNE-P, these problems will have to be solved one at a time with the Authority's oversight and with the active involvement of all industry players.

In short, numerous customer impacting operational barriers currently render CLEC entry via UNE-L uneconomic throughout Tennessee, and the Authority should so find. Upon reaching this conclusion (if not beforehand), the Authority should work with the industry to address that impairment so that the operational barriers that currently exist may be removed

MCI's Tennessee Local Mass Market Service

Q. WHY IS IT IMPORTANT FOR THE AUTHORITY TO CONSIDER CLECS' EXPERIENCE IN ENTERING THE TENNESSEE LOCAL CONSUMER MARKET?

A A review of CLECs' experience to date with UNE-P should provide the Authority with a general understanding of the kinds of obstacles that must be overcome in developing and implementing a new service delivery method. And consideration

of CLECs' fledgling efforts to implement UNE-L will provide insight into the real-world operational challenges that CLECs face when attempting to serve the mass market with their own switches. Further, CLECs' efforts to enter the Tennessee local consumer market shed light on what consumers have come to expect when they migrate from one local service provider to another. Understanding those consumer expectations is a key part of recognizing and addressing operational problems.

Q. WHAT IS THE DIFFERENCE BETWEEN UNE-P AND UNE-L?

A. UNE-P involves the leasing of the piece parts of BellSouth's network on an end-to-end basis. When a customer is migrated from BellSouth to a UNE-P CLEC, no changes are made to the physical facilities used to serve the customer. To date, UNE-P has been the only service delivery method that has enabled CLECs to serve residential and small business customers on a broad scale and will continue be the only way to provide such service for some time.

In contrast, UNE-L involves leasing the customer's loop, terminating that loop to a CLEC's collocation space in BellSouth's central office (assuming the CLEC has such a space), and transporting calls to the CLEC's switch from which the customer draws dial tone and receives local service. Migrating a customer from BellSouth today to a UNE-L CLEC requires the customer's loop to be "cut over" from the BellSouth switch to the CLEC's collocation equipment while the customer's service is still "live," thus giving rise to the term "hot cut." Hot cuts are required in all UNE-L scenarios, including when a CLEC migrates its own or another CLEC's UNE-P customer to UNE-L, or when a UNE-L customer moves

from one CLEC to another, or even when a CLEC UNE-L customer is won back to BellSouth Many steps in the cutover process are manual, which inevitably leads to customer outages and other problems that occur only rarely with UNE-P migrations In addition, carriers must exchange critical information with each other and third parties (for example the local number portability transaction), but the processes for doing so are far from seamless.

Q. PLEASE DESCRIBE THE PROCESS THAT LED TO MCI'S LAUNCH OF LOCAL MASS MARKET SERVICE IN TENNESSEE.

A. That process was a long one, beginning with the passage of the Telecommunications Act of 1996 ("Act") Although the Act required BellSouth to unbundle its network, a number of battles had to be fought before MCI could launch its local consumer service in Tennessee. First of all, CLECs had to establish the right to use UNE-P, which took several years and two U.S. Supreme Court decisions Second, the industry and the Authority undertook lengthy UNE pricing proceedings, in an effort to move UNE rates closer to the TELRIC standard required by the FCC Finally, major changes taking several years were required to modify BellSouth's operations support systems ("OSS") to make it feasible to order and provision service using UNE-P in the volumes required to serve mass market customers.

UNE-L implementation will involve additional systems requirements and changes, including enhanced electronic provisioning processes to allow UNE-L orders to flow through BellSouth's systems, processes to implement seamless CLEC-to-CLEC migrations at high volumes, and coordination with non-ILEC

systems such as the NPAC and the ALI database provider to ensure that customer migrations are completed in a timely and correct manner. Since outside organizations such as NPAC have not had to deal with mass markets customer migrations of the type seen with UNE-P, they are untested and potentially unready for these changes, making the process of curing impairment all the more difficult.

Q. WHEN DID MCI LAUNCH ITS LOCAL CONSUMER SERVICE AND WHAT HAS ITS EXPERIENCE BEEN?

A In April 2002 MCI launched "The Neighborhood built by MCI" in Tennessee and a number of other states Since then, MCI has expanded its local footprint and now serves tens of thousands of UNE-P lines in Tennessee and more than 3 5 million nationally The Neighborhood, which uses UNE-P, provides Tennessee residential and small business consumers with packages of local, intraLATA and interLATA voice services, along with assortments of popular features

Q. DOES MCI PLAN TO MOVE ITS LOCAL RESIDENTIAL AND SMALL BUSINESS CUSTOMERS TO ITS OWN NETWORK?

A Yes, but only where it makes operational and economic sense to do so sense to do so. MCI currently is evaluating the use of UNE-L for its residential and small business customers Once the problems with full-scale use of UNE-L described in my testimony and in MCI's network operational testimony are corrected (and the economic issues addressed in MCI's economic testimony are addressed), we can begin to make the transition from UNE-P to UNE-L The timing and scope of the deployment will of necessity be limited not only by the resolution of

operational and economic issues, but also by MCI's collocation and switch footprint and availability.

Q. WHY DOES MCI WANT TO TRANSITION CUSTOMERS FROM UNE-P TO UNE-L?

A There are at least two reasons. First, MCI, like any carrier, would prefer to provide service using its own network as much as possible because doing so would allow MCI both to use its state-of-the-art network and to promote further innovation of its products and services through further development and deployment of new technology Although UNE-P has been, and remains, critical to MCI being able to provide local residential and small business service in Tennessee, UNE-P requires MCI to rely on its chief competitor, BellSouth, for network services. To the extent it is economically and operationally viable to do so, MCI would prefer to use its own network via UNE-L, to provide service to its customers

Second, MCI must take into account the changes taking place today in the telecommunications industry. Telecommunications is gradually moving from an industry controlled by large monopolies to one with multiple carriers offering multiple services to a dynamic customer base. The trend in the industry is toward bundled services and IP-centric offerings that enable consumers to select one carrier that meets all of their communications needs As MCI begins to roll out its broadband services to consumers, it only makes sense to integrate its broadband facilities with its voice facilities Eventually, when voice over internet protocol ("VoIP") replaces traditional circuit switching as the technology of choice, it will

be essential that MCI move off BellSouth's circuit switches and onto its own facilities. MCI is planning for that future while serving its more than 3.5 million mass markets customers today

Q. WHERE WOULD MCI POTENTIALLY BE ABLE TO PROVIDE UNE-L SERVICE?

A UNE-L requires the CLEC to have its own switch and to be collocated in the BellSouth central office where the loops of the customers it wants to serve are terminated. MCI initially will be able to provide UNE-L service only in areas where it already has deployed collocation equipment and local switches. MCI has been a facilities-based local exchange carrier in the large enterprise market for a number of years. MCImetro -- MCI's CLEC -- installed its first switch in 1995 and since then has installed local switches, collocations in BellSouth central offices and fiber rings in major metropolitan areas throughout the country. MCI uses these facilities (along with leased high capacity loop facilities or their equivalent) to provide competitive local exchange service to business customers today. Moving to UNE-L would enable MCI to take advantage of those facilities. MCI will use its network wherever and whenever it makes operational and economic sense to do so instead of constantly having to rely on, and do battle with, BellSouth for the nondiscriminatory use and correct pricing of its network. But MCI can do this for mass markets customers only when it can ensure that those customers will continue to have the same seamless migration experience that its UNE-P customers have today.

Q. DOES MCI INTEND TO USE UNE-L EVERYWHERE IT HAS MASS-MARKET CUSTOMERS?

A No I can't imagine that would happen For one thing, there are many areas and even entire states where MCI does not have any facilities. And it is highly unlikely that UNE-L will make economic and operational sense everywhere in every state, but that is an analysis that will be discussed in detail in the economic testimony being filed by MCI in this proceeding

Q. WHAT IS THE SIGNIFICANCE TO THIS CASE OF MCI'S PLANS TO BEGIN TRANSITIONING CUSTOMERS TO UNE-L?

A. MCI's review of the potential for moving to UNE-L illustrates the fundamental point of the *Triennial Review Order*[1]: MCI and other CLECs have every incentive to serve customers over their own networks, and will do so where and when it makes operational and economic sense. They do not need to be forced to do so Once the operational and economic barriers have been brought down, CLECs will move freely to a UNE-L strategy, something they cannot do today. The success of that transition will be the best evidence that CLECs are no longer impaired without access to BellSouth switching.

Q. WHAT WOULD HAPPEN IF COMPETITORS WERE REQUIRED TO MOVE TO UNE-L TODAY?

[1] *See In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carrier*, CC Docket No 01-338, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No 96-98, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking FCC 03-36 (rel Aug 21, 2003) ("*Triennial Review Order*" or "*Order*")

A. There would be chaos and consumers would be the ones hurt. The UNE-L migration process today is manually intensive and cumbersome with multiple points of failure that could result in delay, inability to receive calls and, worse yet, loss of dial tone for the consumer Customer migration problems could lead to customers being "stranded" on a carrier's network, unable to move anywhere else These and other operational barriers prevent CLECs from being able to meet customer expectations. Thus, if the transition to UNE-L were made prematurely, the progress that has been made toward a dynamic, competitive telecommunications market since the passage of the Act would be destroyed.

For UNE-L to be an acceptable service delivery method, it must allow competitors to meet and even exceed customers' expectations In particular, migrations between carriers using UNE-L must be seamless and the systems and processes of the entire industry – BellSouth, CLECs and third parties – must be fully functional and capable of working together effectively. Today these systems and processes are highly manual and are untested in a mass market environment.

Q. ISN'T THE TRANSITION TO UNE-L SIMPLY A MATTER OF HOT CUTTING A LOOP FROM ONE LOCATION TO ANOTHER?

A. No, moving to UNE-L is more than hot cutting loops from the BellSouth Main Distributing Frame (MDF) to MCI's collocation It includes developing the processes and systems necessary to ensure that the customer's E911 service is not interrupted or the data rendered inaccurate, to "port" his number to his new carrier (and to a second carrier when that is requested), and to resolve problems when

they arise. And it requires that this transition take place without harming that customer and without limiting his competitive choices

Q. HAS ANY CARRIER ATTEMPTED TO TRANSITION TO AND SERVE A LARGE MASS MARKET RESIDENTIAL CUSTOMER BASE USING UNE-L?

A. No. No carrier has yet attempted a broad-scale facilities-based approach for residential mass markets customers. Because this will be a new experience for the industry, many of the problems that arise will have to be worked out for the first time, which will add to the difficulty of creating workable solutions. To use UNE-L, CLECs will need to interconnect their networks with BellSouth's network in a much more integrated fashion than ever before Beyond making the changes I describe below that are necessary to order and support UNE-L, "interconnection" in this sense also means that CLECs will need to physically connect their local networks with BellSouth's local network and switches on a broad scale to get access to BellSouth's loops to provide service to customers It also will require capacity upgrades to MCI's and other carriers' E911 trunks and additional trunking to BellSouth's tandem switches For example, today a significant number of calls between BellSouth and CLEC customers in the same rate center are completed in BellSouth's switch. Once customers are moved to UNE-L, however, these calls will need to route to the BellSouth tandem switch to be completed, potentially increasing the need for tandem switching capacity. MCI's Network Impairment testimony describes these issues in greater detail.

Q. WILL THE TRANSITION TO UNE-L INVOLVE MORE THAN SIMPLY MIGRATING MCI'S EXISTING UNE-P CUSTOMER BASE?

A Yes, definitely. The move to facilities-based competition is not simply about customers moving from UNE-P to UNE-L, or even from the incumbent monopoly to the CLEC. Customers also will move from one CLEC to another. Those CLECs may be UNE-L CLECs, UNE-P CLECs, resellers or cable companies. Today, customers return to BellSouth and migrate back and forth between UNE-P and resale CLECs on a daily basis. Some customers also try to migrate from facilities-based providers to UNE-P CLECs, but this process is almost completely manual and far from seamless The key point here is that MCI's move to facilities-based competition will not be limited to establishing and maintaining the relationship between MCI and BellSouth; it involves the entire industry -- MCI, BellSouth, and every other CLEC offering service in the state. And in reality, it involves more than that. As I will discuss in greater detail later, the move to facilities-based competition will have implications for third parties that provide necessary but ancillary services, such as E911 providers and the LNP provider.

Triennial Review Order

Q. DID THE FCC'S TRIENNIAL REVIEW ORDER RECOGNIZE THAT THERE ARE OPERATIONAL BARRIERS TO UNE-L?

A Yes. Although I am not a lawyer, I have reviewed the *Triennial Review Order* issued by the FCC with respect to the operational issues it addresses, and the FCC clearly recognized that operational barriers exist to UNE-L competition today. The FCC made a national finding of impairment with respect to unbundled local

switching at the mass market level based on the existence of these operational barriers. (*Order* ¶ 419.) In essence, the FCC realized that competitors are currently unable to move to a UNE-L service delivery method with the processes and procedures that currently exist. Further, the FCC concluded that, for local competition to exist, competitors must have access to unbundled local switching until the existing operational and economic issues with UNE-L are fully identified, investigated and adequately resolved.

Q. DID THESE OPERATIONAL BARRIERS LEAD TO THE FCC'S FINDING OF IMPAIRMENT WITH RESPECT TO MASS MARKET SWITCHING?

A Yes. In the *Triennial Review Order*, the FCC explicitly recognized the complex operational issues currently preventing UNE-L from being a viable local service delivery method and concluded that these issues were serious enough to find nationally that competitors are impaired without access to unbundled local switching. (*Order* ¶¶ 419, 456.) Unlike UNE-P migrations, in which the CLEC uses the same facilities as the ILEC in providing local service, UNE-L migrations are complicated by the necessity of physically moving the customer's loop to the CLEC's collocation equipment and from there routing the customer's calls back to the CLEC's switch In addition, more data must be exchanged between local providers with UNE-L than is required with UNE-P The FCC recognized that until these operational issues involving UNE-L are addressed and adequately resolved – that is, until migrations and service changes in a UNE-L environment

are as seamless and trouble free as they are with long-distance and UNE-P – a transition to UNE-L would do nothing but harm competition and consumers.

The FCC concluded that the record before it evidenced a wide array of operational issues that prevent UNE-L from being a realistic local service delivery method at present (*See, e g , Order* ¶¶ 476-478.) As the FCC stated, competitive carriers may face barriers associated with loop provisioning that may impair their entry into the mass market. (*Order* ¶ 512.) The FCC asked the states to determine whether ILECs are providing nondiscriminatory access to unbundled loops. (*Order* ¶ 512.) In making this determination, the FCC requested the states to consider more granular evidence concerning the ILECs' ability to transfer loops in a *timely and reliable* manner. (*Order* ¶ 512.) Accordingly, before UNE-L can be an operational reality, it must be possible quickly, seamlessly and reliably to transfer loops from ILEC to CLEC as well as CLEC to CLEC and CLEC to ILEC – both as an operational necessity and to give customers the reliable, problem-free service they demand and expect

Q. DID THE FCC DISCUSS THE "HOT CUT" PROCESS AT SOME LENGTH?

A. Yes, and with good reason The FCC noted that a "hot cut refers to a process requiring incumbent LEC technicians to disconnect manually the customer's loop, which was hardwired to the incumbent LEC switch, and physically re-wire it to the competitive LEC switch, while simultaneously reassigning (*i e.*, porting) the customer's original telephone number from the incumbent LEC switch to the competitive LEC switch." (*Order* ¶ 421 n.1294.) Hot cut problems listed by the

FCC included "the associated non-recurring costs, the potential for disruption of service to the customer, and our conclusion, as demonstrated by our record, that incumbent LECs appear unable to handle the necessary volume of migrations to support competitive switching in the absence of unbundled switching." (*Order* ¶ 421 n.1294.) The FCC explained that because of the manual, labor-intensive nature of the hot cut process, "hot cuts frequently lead to provisioning delays and service outages, and are often priced at rates that prohibit facilities-based competition for the mass market." (*Order* ¶ 465.) In other words, the FCC concluded that the hot cut process posed a prohibitive barrier to UNE-L

Q. DID THE FCC DISCUSS THE IMPACT OF OPERATIONAL IMPAIRMENT ON CUSTOMERS IN ITS ORDER?

A. Yes. In addition to discussing the technical aspect of these network operational issues, the FCC also explained how these operational issues negatively affect the customer's experience The FCC noted that the delay that accompanies a UNE-L migration prevents competitors from providing service in a way that mass-market customers have come to expect. (*Order ¶* 466.) For example, in Tennessee a BellSouth UNE-P migration takes about one business day, while migrating the same customer to UNE-L takes substantially longer, assuming BellSouth has the resources necessary to perform the cutover on the requested date. A UNE-L migration using today's hot cut process will always have the potential to harm a customer more than a UNE-P migration, because, as the FCC noted, "[f]rom the time the technician disconnects the subscribers loop until the competitor reestablishes service, the subscriber is without service." (*Order ¶* 465 n.1409)

Similarly, the UNE-L process of "porting" the customer's number from the ILEC switch to the CLEC switch "also potentially subjects the customer to some period of time where incoming calls will not be received," because if the number is not ported properly, calls will not be routed to the customer's new number on the CLEC switch and the calling party will receive a message stating that the customer's number is no longer in service. This problem can be particularly significant when the customer has called 911 and the 911 operator attempts to call the customer back. In addition, customers will need to re-program customer initiated features like speed dialing and call forwarding after the cut is completed, adding another failure point to the process.

The FCC recognized that because "mass market customers generally demand reliable, easy-to-operate service and trouble-free installation," such disruptions and delays negatively affect customers' perceptions of the CLEC's ability to provide service. (*Order* ¶ 467.) Indeed, the FCC found in the *Triennial Review Order* that customers experiencing such difficulties are likely to blame the CLEC, not the ILEC, even if the problem is caused by the ILEC. (*Order* ¶ 467.) Moreover, because customers view the ILEC as a baseline alternative to the CLEC for local service, customers' negative perception of a CLEC's service directly hampers a CLEC's ability to win and retain customers. (*Order* ¶ 466.)

Q. WHAT WAS THE FCC'S ULTIMATE CONCLUSION?

A. The FCC found that CLECs are impaired nationally without access to the ILECs' unbundled local switching. The FCC recognized that numerous operational impediments make UNE-L currently infeasible, or, at most, possible only to a

limited extent, and then only with a great risk of negative customer experience Based on the FCC's reasoning, these operational impediments must be identified and resolved before UNE-L can be considered a viable service delivery method.

Customer Expectations

Q. HOW HAVE CHANGES IN THE TELECOMMUNICATIONS INDUSTRY AFFECTED CUSTOMERS' EXPECTATIONS CONCERNING THEIR ABILITY TO MOVE FROM ONE CARRIER TO ANOTHER?

A. Today's telecommunications consumer is savvier than consumers of the past because of experience with long distance and local competition. Today's consumer moves frequently between carriers and expects seamless migrations Carriers must be able to provide consumers with seamless and efficient migration between carriers, as well as timely repair and maintenance If a carrier is unable to provide this high level of service to customers, it will not survive as a competitor.

Q. HOW DOES THE LONG DISTANCE TRANSITION WORK TODAY?

A. Migrations among carriers in the long distance market have set a benchmark for customers' expectations concerning migration among local providers. Through years of experience and expense, ILECs and interexchange carriers ("IXCs") developed the Primary Interexchange Carrier ("PIC") process, using the Customer Account Record Exchange Interface ("CARE") interface It has taken more than fifteen years of PIC process improvements since CARE was introduced in 1988 for transitions between long distance providers to be as smooth as they are today. For the majority of all such transactions, this process is completely automated –

the order comes into the underlying service provider's computer system containing customer data, and if the order meets basic criteria, it flows through the system to the switch, where the PIC is changed, and then a confirmation message is sent directly to the new IXC. The entire process takes approximately twelve hours Thus, because of a standard, automated process that was created through years of refinement and cooperation, transitioning between long distance providers is the quick and relatively problem-free process that customers have come to expect.

Q. IS THERE A SIMILAR EXPERIENCE TODAY IN THE LOCAL SERVICE ARENA?

A. Yes, for most customers, UNE-P transitions are also relatively seamless. CLECs and BellSouth have worked together since the passage of the Act to develop an automated process for the smooth migration to UNE-P of retail, resale, and CLEC-served UNE-P local voice customers. Today, the customer does not know that the process is occurring until it is completed and the new carrier's features and functionalities, such as voice mail, appear on his line. Since BellSouth no longer issues disconnect and new orders for UNE-P migrations, only rarely is there loss of dial tone, the need for coordination between BellSouth and the CLEC, or manual intervention at the central office MDF. Rather, just as in the long distance world, the CLEC sends an automated request to BellSouth for the migration of the new CLEC customer, and the change is made In this way, the UNE-P process is quite similar to the CARE long distance process, and is indeed no different from the customer's experience in changing features of its BellSouth

service without changing providers. As a result of the industry efforts concerning UNE-P, millions of customers have been migrated successfully from BellSouth to UNE-P CLECs, and from one UNE-P CLEC to another UNE-P CLEC, with no loss of dial tone and no need for central-office-based installation and maintenance support

Q. CAN YOU PROVIDE A MORE DETAILED DESCRIPTION OF THE UNE-P MIGRATION PROCESS?

A Yes. The process of migrating a BellSouth customer to CLEC UNE-P service proceeds is outlined in Exhibit SL-1

Q. HOW LONG DOES THE UNE-P MIGRATION PROCESS GENERALLY TAKE?

A The entire retail-to-UNE-P migration process is typically completed within one business day, regardless of the features ordered. CLECs can send and receive large numbers of transactions (including migrations, disconnections, and feature changes) per hour, because the process is almost wholly electronic And these transactions can be completed on the same day, without the need to negotiate with a project manager or schedule work times. Most importantly, just like a long distance PIC change, the UNE-P migration process is relatively seamless to the customer and allows customers to change carriers whenever they wish.

Q. IS IT IMPORTANT THAT CUSTOMERS BE ABLE TO CHANGE PROVIDERS RAPIDLY AND SEAMLESSLY?

A Yes, as noted above, today's consumer changes carriers more frequently than consumers of the past and expects to be able to do so in an efficient and timely

manner. In the telecommunications industry, this movement of customers to and from carriers is commonly referred to as "churn." Churn generally describes the behavior of customers as they move not just from BellSouth to a CLEC but also from a CLEC to BellSouth and from a CLEC to another CLEC. Today, migrations between CLECs that use UNE-L (for example, from UNE-P CLEC 1 to UNE-L CLEC 2 or from UNE-L CLEC 1 to UNE-L CLEC 2) are not seamless, quick or efficient, indeed, they usually take extended periods of time and often fail. Without a simple and seamless method to transfer customers between providers using different facilities-based service delivery methods, customers may become "stuck" and unable to exercise their choice to leave one carrier and migrate to another.

Q. IS CHURN A BAD THING OR A GOOD THING?

A It is really both. Churn is a good thing for consumers, because it allows them to try new products and services from varying providers. Such consumer movement encourages carriers to innovate and become more efficient, and, in turn, rewards that innovation and efficiency. In a very real sense, churn is the proof that the competitive process is working. Although good for consumers, churn is problematic for industry players. not only is it expensive when consumers pick a provider for only a short period of time and then leave for another provider, but churn also complicates both the record keeping and billing processes that accompany acquiring and losing a customer for both the acquiring carrier and the underlying network service provider However, competitors realize that churn – the customer's ability to move amongst providers quickly and efficiently – is a

necessary and integral part of a competitive telecommunications landscape. Consumers cannot be "locked in" to a single provider or "stranded" on a single service delivery platform. They must be able to make choices and migrate among providers at will.

Q. IS THERE A LOT OF CHURN IN THE INDUSTRY TODAY?

A. Yes, as I discussed above, customers are more educated and savvy today and move more frequently among carriers to get better service packages. Churn rates today are fairly high in the telecommunications industry, in both long distance and UNE-P local markets. These high churn rates have been enabled by regulatory requirements and changes in the OSS of the carriers Specifically, equal access in the long distance arena, and UNE-P and electronic order processing in the local service arena, have facilitated customer migrations and permitted churn to exist and accelerate.

Operational Impairment

Q. ARE THERE UNE-L PROVIDERS SERVING MASS MARKET CUSTOMERS ON A BROAD SCALE TODAY?

A. No There are virtually no UNE-L providers from which mass markets (and particularly residential) customers can choose, and those providers that do exist provide service in limited areas and support a limited range of customers.

Q. WHY NOT?

A There are a number of economic and operational reasons. One of the operational reasons is that a migration to and from the UNE-L service delivery method is anything but simple. The systems and processes involved in a UNE-L migration,

as opposed to a UNE-P migration, are complex, manually intensive and cumbersome.

Q. WHAT MAKES THE UNE-L MIGRATION PROCESS SO COMPLEX?

A. Unlike UNE-P, UNE-L requires a physical change to the facilities involved in providing service to the customer because the loop serving the customer must be physically disconnected from the BellSouth retail or CLEC UNE-P facilities and then connected to the UNE-L carrier's facilities in the BellSouth central office Moreover, UNE-L requires an unprecedented exchange of information between the multiple parties involved, including providers not generally involved in the processes reviewed and tested by the Authority. The process flow shown in Exhibit SL-2 illustrates the pre-ordering, ordering, provisioning, maintenance and repair and billing steps involved in a typical BellSouth retail to CLEC UNE-L migration. The migration process is described in narrative terms in Exhibit SL-3

Q. ARE THERE COMPLEXITIES THAT THE DIAGRAM IN EXHIBIT SL-2 DOES NOT INCLUDE?

A. Yes, while this process flow outlines the steps in a typical BellSouth retail to CLEC UNE-L migration, there are several things that it simply cannot illustrate adequately: (1) at numerous points in this process, manual handling of the UNE-L migration tasks is required, often resulting in errors and delay; (2) UNE-L flow through rates are lower than that of UNE-P, causing still more manual work and, hence, more delay; (3) there is a significant amount of information that must be exchanged among various parties to the migration, and the failure of this information to reach its destination in a timely and accurate manner could

significantly affect a customer's service, and (4) the scalability of this process to meet mass-market volumes is doubtful and untested because loops have never been migrated at mass market volumes at this time. All four of these issues individually or in combination if left unresolved have the potential to derail a competitor's ability to utilize UNE-L to serve mass-market customers.

Q. IS THE UNE-L MIGRATION PROCESS READY FOR MASS-MARKET USE?

A. Absolutely not If carriers move from a UNE-P to a UNE-L service delivery method before the processes and procedures are in place to allow migrations to take place quickly and efficiently, the churn that is a trademark of competition in the long distance and UNE-P markets will create significant problems both for carriers and customers. Without seamless and efficient migration processes in all directions and among all carriers, customers' attempts to migrate away from their existing carriers could overwhelm the ability of carriers to accommodate those moves. The result could be that customers are in effect held hostage to cumbersome untested processes that cannot support the volume of orders being issued

In addition, the description and process flow discussed above only outlines the retail to CLEC UNE-L migration. This migration is only one of several migration scenarios that CLECs will encounter in a dynamic competitive UNE-L market The core scenarios (as seen from MCI's perspective) include the following·

- Retail to MCI UNE-L migration

- MCI UNE-P to MCI UNE-L conversion (the "batch" conversion process)
- CLEC UNE-P to MCI UNE-L migration
- CLEC UNE-L to MCI UNE-L migration
- MCI UNE-L to BellSouth retail migration
- BellSouth retail DSL customer (line sharing or FastAccess) to MCI line splitting via UNE-L
- Line-splitting UNE-P CLEC to MCI UNE-L line splitting (voice and data) migration

This list is by no means exhaustive, but illustrates the kinds of migrations that carriers will need to be able to process on a regular basis. The sheer number of scenarios that must be handled gives some indication of the complexity that moving to UNE-L will entail Moreover, many of these scenarios involve greater complexity than the retail-to-MCI migration, because some involve additional parties and some involve DSL service. MCI has attached these core migration process flows to this testimony as Exhibit SL-4 Included in these process flows are numbered points in the process where potential challenges may well exist as well as a glossary of relevant acronyms

Q. PLEASE GIVE SOME EXAMPLES OF THE COORDINATION BETWEEN THE CLEC, BELLSOUTH AND THE CUSTOMER THAT IS REQUIRED TO EFFECT A UNE-L MIGRATION.

A A cutover from BellSouth to a UNE-L CLEC requires coordination between the CLEC and BellSouth to request the physical movement of the loop, to test the loop once it has been moved, and to create and issue the E911, and LNP

transactions. Moreover, if a customer is served by IDLC, a dispatch to the remote terminal or even the customer premise may be required. The highly manual nature of the hot cut itself (*i.e* , the lifting and laying of the loop) is presumably the reason that BellSouth has included a project manager in its batch hot cut proposal; a skilled manager is needed to coordinate the many manual activities (including the scheduling of the individual hot cuts) involved in the hot cut process. In all migrations, the customer will need to participate, too, by reprogramming features such as speed dial or variable call forwarding and perhaps remaining at home for a technician visit to connect the new loop and potentially to make changes to the inside wire termination at the NID.

Q. IS MOVING BETWEEN CLECS ALSO DIFFICULT?

A Yes Once a customer is on a loop, the process of moving between CLECs becomes more complicated because BellSouth no longer has a record of the customer in its systems.

Q. PLEASE DESCRIBE THE COORDINATION THAT IS REQUIRED BETWEEN CLECS TO EFFECT A UNE-L CLEC-TO-CLEC MIGRATION.

A. A CLEC-to-CLEC migration requires the winning and losing CLEC to cooperate to provide the information necessary to reuse the customer's existing facility (the loop) while notifying all the switches in the worldwide network that the customer's telephone number has moved from one carrier to another. And both the winning and the losing CLEC have to work with BellSouth to coordinate the movement of the customer's loop from one collocation cage to another The

winning CLEC has to work with the losing CLEC to select a date for the migration and they have to ensure that the losing CLEC's "port out" request to BellSouth will "mate" with the winning CLEC's migration request If the port out request is rejected, the CLECs must negotiate a new due date and start all over again.

Q. WHAT NEEDS TO BE DONE TO ADDRESS THE ISSUES OF MANUAL PROCESSING AND MULTIPLE PARTY COORDINATION?

A. MCI recommends that these issues be addressed in Authority-sponsored industry workshops Other recommendations are made in MCI's network operational testimony.

Q. DO YOU EXPECT THERE ARE OTHER OPERATIONAL BARRIERS THAT EXIST FOR UNE-L THAT MCI HAS NOT YET DISCOVERED?

A. Yes. As with the development of UNE-P, operational issues will emerge as carriers develop their systems to process UNE-L ordering and provisioning. Today, I am only discussing issues that I am aware of as of the time of this filing. Many new issues can be expected to arise as carriers move toward UNE-L service, and the industry and the Authority will need to address those problems during the process of removing operational barriers to UNE-L.

Q. YOU ALSO MENTIONED OPERATIONAL ISSUES RELATING TO INFORMATION EXCHANGE. PLEASE EXPLAIN WHAT YOU MEAN BY THAT.

A There are multiple points where there are changes to customer records and information in both internal and external databases that are required for migration

to a UNE-L service delivery method Many of these changes result from the fact that the CLEC switch will be used in the provision of service with UNE-L versus the BellSouth switch that is used with UNE-P Because there is very little mass market UNE-L competition today there are a great many unanswered questions surrounding these transfers and information exchanges. These exchanges of information all represent potential points of failure with UNE-L. These coordination, database, and ordering issues represent operational barriers that are of critical importance to both the customer and the service provider.

I will describe information exchange issues involving databases relating to CSRs, LFACS, E911, NPAC, LIDB, CNAM, DL/DA and printed directories Changes to these databases must take place as efficiently and seamlessly as possible in every UNE-L scenario In addition, I will discuss the changes to trouble handling that must take place before UNE-L customers can expect the level of repair service to match that of UNE-P. After outlining these issues, I also will discuss approaches MCI recommends for addressing them, which should provide at least a starting point for resolution.

Q. PLEASE EXPLAIN THE CSR ISSUE.

A. Obtaining accurate and complete customer information is essential to a CLEC's ability to submit a valid order. CSRs are used to identify address, feature, directory and other information for migrating customers. CSRs show the most current customer configuration based on the switch port and the current carrier's internal billing systems. During the pre-order phase of a migration, the CLEC representative needs to obtain current customer and service information to create

the order. While this information can be retrieved on a real time basis for BellSouth retail customers (and some UNE-P CLEC customers), the systems and processes required to obtain and share this information have not been developed for all migration scenarios, most notably CLEC-to-CLEC migrations.

Q. IS THIS AN ISSUE FOR INITIAL MIGRATIONS FROM BELLSOUTH?

A No. This is not an issue in initial migrations from BellSouth because BellSouth now allows UNE-P customers to be migrated by telephone number and house number, both of which are contained in BellSouth's CSRs

Q. IS THIS PROCESS THE SAME WITH ALL MIGRATIONS?

A No Obtaining this type of customer information becomes much more difficult in a CLEC UNE-L-to-CLEC UNE-L migration because BellSouth no longer has the current customer configuration information Although the participants in a Florida collaborative have agreed to a 48 hour timeframe for exchanging CSR data, there is no way to ensure that this timeframe is met, and numerous problems with the process still exist. For example, the "winning" CLEC must contact the "losing" CLEC by e-mail, fax, through a web site, or most often, by telephone, to obtain the relevant information. Obtaining information by telephone is not only manually intensive, but is made all the more difficult because there is no complete list of who and when to call. The manual nature of the process means it takes a long time (as opposed to instantaneous transmission for UNE-P) and has a greater margin for error because as yet, there are no CLEC CSR standards for database integrity. MCI's small business team has had significant problems in obtaining CSRs from a number of the CLECs active in the BellSouth territory To make

matters worse, each carrier's CSR looks different and must be interpreted differently, which gives rise to miscommunication.

Q. IS MORE INFORMATION REQUIRED FOR UNE-L MIGRATIONS THAN CLECS CURRENTLY PROVIDE TO EACH OTHER?

A Yes. Once the customer has migrated to a UNE-L CLEC, additional information is required to effect a subsequent customer move. For example, the carrier to whom the customer is migrating needs the customer's "circuit ID," which will be used by BellSouth to track where the customer exists on the main distribution frame of BellSouth's switch The circuit ID generally is not included in the CSR, but rather is passed to the first UNE-L CLEC when BellSouth returns a firm order confirmation. The circuit ID is critical, since the winning CLEC will need that information to ensure that the same physical loop can be used to serve the customer, and BellSouth needs the circuit ID to provision the customer's existing loop to the winning CLEC, rather than having to find and provision another loop that its systems show to be available. Because all of the information needed for UNE-L migrations is not readily available – either because BellSouth no longer maintains it or the losing CLEC refuses to provide it, or because there are not reliable, comprehensive systems for transferring this information among CLECs – a new pre-order processes, including a new method of obtaining CSRs from all industry players must be developed for UNE-L.

Q. WHAT CSR INFORMATION DOES MCI REQUEST BE INCLUDED?

A. MCI needs the customer's billing telephone number; working telephone number; billing name and address; directory listing information (including listing type),

complete service address; current PICs (for both inter and intraLATA, including freeze status); local freeze status, if applicable, all vertical features, options (such as toll blocking and remote call forwarding), tracking or transaction number; service configuration information (*i.e.*, whether customer is served via resale, UNE-P, UNE-L, etc.); the identification of the network service provider, and the identification of any line sharing or line splitting on the line; the BellSouth feature name and USOC for vertical features and blocking options to ensure that CLECs can understand each other's CSRs; circuit ID information, and identification of line sharing/line splitting providers. Currently, some CLECs are not providing any CSR information, while in other cases the information is provided slowly Some CLECs that provide CSR information do not include all the customer's features or the customer's circuit ID, or do not provide an accurate circuit ID.

Q. DO THESE CSR ISSUES AFFECT A CUSTOMER'S ABILITY TO MIGRATE BETWEEN UNE-L CLECS?

A Yes This CSR issue must be addressed and the infrastructure developed prior to the implementation of UNE-L Otherwise, customers will be stuck where they land in their first migration or BellSouth will be forced to install more and more facilities to compensate for the inability to identify the current circuit being used.

Q. DOES MCI HAVE A PROPOSAL TO RESOLVE THESE CSR ISSUES?

A Yes. MCI proposes the establishment of a distributed CSR retrieval system, similar to the CARE Clearinghouse, which would be used by CLECs and BellSouth alike to route requests for CSR information to the customer's current carrier. The ability to obtain a CSR, including circuit ID information, from all

CLECs will be necessary before UNE-L migrations can be handled on the same basis as UNE-P migrations.

Q. PLEASE EXPLAIN THE DISTRIBUTED DATABASE CONCEPT IN MORE DETAIL.

A. MCI recommends that a central clearinghouse be established to identify the owner of a particular customer and to forward queries to the current provider to retrieve that customer's service information. The clearinghouse would serve as a hub for CSR requests, directing them to the proper providers following a single data communications protocol CLECs would maintain CSRs in a standard format and would agree to standard delivery methods and time frames. CLECs could also establish direct communications between each other if the volume of requests warranted it Companies that did not want to maintain their own CSRs or could not develop the software necessary to electronically transmit that information to the clearinghouse could contract with third party vendors (or even BellSouth) to support this process State Authoritys would need to develop standards and procedures to ensure that information was exchanged within the appropriate time frames.

Q. WHAT CAN BELLSOUTH DO TO SUPPORT THE CLEC TO CLEC MIGRATION PROCESS NOW?

A BellSouth currently allows CLECs who have agreed to view each other's UNE-P CSRs to do so via the LENS GUI MCI has issued a change request to BellSouth to allow these CSRs to be provided via EDI BellSouth should implement this change request immediately and, in addition, should remove the requirement that

CLECs contract with each other in order to take advantage of this functionality In addition, until a CSR Clearinghouse is developed BellSouth should modify its CSR databases to continue to provide access to the underlying information about customers and their service remaining with BellSouth after a customer has migrated to UNE-L, as has been recommended in the Florida collaborative

Q. WHY IS LFACS IMPORTANT?

A Before migrating a customer to UNE-L, MCI must determine whether that customer is served by IDLC MCI does this by submitting a loop make-up inquiry to LFACS. The accuracy of the data retrieved from this database is critical to the CLEC's ability to determine if it can serve the customer, particularly for combined voice and data offerings (DSL). For example, the CLEC needs to know if the customer's loop is copper (and can be unbundled) or is served through an IDLC system, or whether the customer has fiber to the home. BellSouth will select one of eight unbundling methods for customers served by IDLC and will not unbundle fiber to the home, so this pre-order information is critical in determining whether the customer can be migrated to a CLEC's switch It is also critical in determining whether customers may obtain DSL after their migration.

Q. IS THE DATA CONTAINED IN LFACS ACCURATE?

A. At this point we do not know. Given the current low level of UNE-L and DSL competition, it is difficult to know how inaccurate LFACS data is, despite testing done during the 271 process. More importantly, as churn continues and more

customers are migrated to UNE-L, won back by the ILEC, and then migrated to other companies, the quality of this database may degrade.

Q. HOW DOES MCI PROPOSE TO RESOLVE THIS ISSUE?

A MCI proposes a process be developed to ensure that updates to LFACS are made on a real-time basis so that this database remains up to date as BellSouth alters or changes its loop plant. This is particularly important as BellSouth takes down its copper plant and replaces it with fiber. On-going audits of LFACS will also be necessary to ensure that the accuracy of this important information source does not degrade.

Q. HOW IS UNE-L TROUBLE HANDLING DIFFERENT THAN TROUBLE HANDLING FOR UNE-P CUSTOMERS?

A Since UNE-P is provided by combining existing elements of the BellSouth network, customer network issues can be resolved in the same way for a UNE-P customer as they are for a BellSouth retail customer. The CLEC uses the BellSouth Mechanized Loop Test (MLT) to identify the trouble and dispatch the required repair personnel. When a customer moves to UNE-L, his service is provided as three separate components – the BellSouth loop, the CLEC collocation equipment, and the CLEC switch. CLECs will need to isolate the trouble to the company responsible for its repair and then dispatch two separate repair forces (CLEC resources to repair their switches and collocation equipment and BellSouth forces to repair the loop or NID) before the customer's service can be restored. This will take additional time that may impact customer service.

In a UNE-L environment, MCI representatives gather the appropriate information from the customer and make an initial trouble assessment. To do this, MCI must "sectionalize" the trouble and determine whether a dispatch to the MCI switch, a dispatch to the MCI collocation, a dispatch to the BellSouth MDF, or a dispatch out to the field is required If the problem is in MCI's portion of the network, MCI either must dispatch a technician to its collocation cage or work with BellSouth to clear the problem. If no trouble is found on MCI's network, typically MCI will request BellSouth to determine if the problem is with BellSouth's network If no trouble is found after a "dispatch in" to BellSouth, the initial ticket may be closed and MCI may have to open a new ticket if it turns out the problem lies at the MDF or the facility running from the frame to MCI's collocation space. This process thus can lead to increased out of service times and harm customers by putting them in the middle of "finger pointing" exercises.

Q. WHY IS THIS AN ISSUE?

A. Since few mass markets customers today have UNE-L service, this trouble handling process has not yet been adapted for a world where customer service outages must be repaired rapidly so that residential customers can continue to be able to receive dial tone at the same rates as BellSouth customers.

Q. HOW DOES MCI PROPOSE TO HANDLE THIS ISSUE?

A. For trouble handling in a UNE-L environment to work properly, CLECs like MCI need to obtain newer and more advanced test equipment as well as to develop internal processes to address this trouble handling and the anticipated volumes. In addition, all parties need to make sure that the dispatch rules surrounding trouble

handling are adequate, function properly and are scaled to mass market volumes. These kinds of issues lend themselves to a workshop process under Authority supervision, along the lines I already have discussed.

Q. WHEN A CUSTOMER MIGRATES TO UNE-L ARE THERE CHANGES INVOLVING A CUSTOMER'S E911 INFORMATION?

A. Yes When a consumer migrates to a UNE-L CLEC, the 911 database must be updated to reflect the new switching provider A customer's migration to a UNE-L CLEC requires BellSouth to "unlock" the E911 database, allowing the CLEC record to overlay the existing BellSouth record with updated information, including the CLEC company code and 7x24 emergency number as well as the current customer address information if necessary

Q. WHAT HAPPENS IF THE CHANGE IS NOT MADE CORRECTLY?

A If this change is not made correctly, the customer's E911 information in the Automatic Line Identification ("ALI") database will not include the CLEC's company ID or the customer's correct address if the customer has moved or the record required some other correction. It is essential that this change to E911 be done correctly and also that it be seamless and transparent to the migrating consumer.

Q. IS THIS CHANGE REQUIRED FOR UNE-P?

A No such change is required for UNE-P because BellSouth retains control over the 911-database information for the UNE-P CLEC and continues to provide trap and trace and law enforcement and health and safety functions. Because there is no change to the E911 database, there is little if any chance for errors to be

introduced and no additional data requirements for the Public Safety Answering Position ("PSAP") administrators.

Q. COULD YOU EXPLAIN THE NECESSARY E911 CHANGE IN MORE DETAIL?

A BellSouth in most cases maintains the 911 selective router used for routing a 911 call to the appropriate PSAP. The PSAP dips into the ALI database when a 911 call is received to retrieve the address of the caller. The PSAP is the custodian of the data required to dispatch emergency personnel The PSAP must have a record for each customer a facilities CLEC has and must be able to contact that carrier. Thus, in a UNE-L environment, there are two orders required for changes to the 911 ALI database. One order must go from BellSouth to the 911 provider to unlock the record in the ALI database. This allows the CLEC to overlay the existing record with the updated 911 ALI record, once the migration has been successfully processed.

The second order must go through the CLEC's vendor (or BellSouth if the CLEC has contracted with it) to overlay the existing 911 record with the new record It is essential that these orders are coordinated so that the BellSouth "unlock" order arrives before the CLEC "create" order to newly populate the database

A critical issue here is the timing of the "unlock" order. BellSouth sends the 911 "unlock" order after the UNE-L work order has been closed in the provisioning system (WFA) The CLEC receives the closure information via an email or fax from the BellSouth EnDI system or via a telephone call if it chooses

the costlier coordinated hot cut option. If this notifier is delayed or lost, the CLEC will not know that the loop order has completed, which may delay its E911 and LNP transactions. Because there will necessarily be a time lag where the 911 system has incorrect information on the network service provider, customers or law enforcement personnel who request a "trap and trace" on the line will be delayed until the proper service provider is identified. BellSouth should also provide CLECs with insight into the EnDI system and develop new metrics to measure its availability and to ensure that it has limited out of service time.

MCI understands that BellSouth now plans to address the notification problem by providing an on-line tracking system similar to that provided by Verizon and proposed by SBC to provide real time notification of order status, but this proposal is still in the "planning stage" and must be reviewed by CLECs before they can determine whether it solves the 911 and LNP problems.

Q. WHAT HAPPENS IF THE ORDERS ARE NOT SEQUENCED CORRECTLY?

A If the sequence of the orders is disrupted, the 911 database cannot be updated While the customer will be able to dial 911, the PSAP will only see the old customer record, which may or may not be accurate and will contain the wrong company ID for correction or trap and trace requests or the wrong address if the customer has moved and then obtained UNE-L service from a CLEC. As the number of UNE-L orders increases and particularly during the bulk transition of customers from UNE-P to UNE-L, the problem will become more severe. In addition, the CLEC will be required to check the PSAP information manually to

determine if the update has been accepted and has passed the myriad of required edits.

Q. HOW SHOULD THIS PROBLEM BE FIXED?

A. MCI suggests that these issues be addressed through a workshop process under the Authority's supervision. As operational barriers to UNE-L are overcome and CLECs transition to that service delivery method, it will be essential to ensure that the required 911 data are accurate as well as seamless and transparent to the consumer. In addition, the Authority, BellSouth, and the CLECs should work with the 911 database providers to improve the error handling capabilities of the system. Currently, 911 errors are returned to CLECs in batch files rather than in real time This increases the potential for late or inaccurate updates to the database.

Q. ARE THERE ISSUES INVOLVING NPAC IN A UNE-L MIGRATION?

A Yes. NPAC handles the data base updates necessary to determine the "home switch" for each UNE-L customer -- that is, the switch that provides the customer with dial tone.

Q. ARE NPAC CHANGES NECESSARY WITH UNE-P?

A. No Since UNE-P uses BellSouth switching, there is no need to send transactions for UNE-P migrations to the NPAC, keeping the number administration task to a manageable level. When CLECs move to UNE-L, however, such transactions become a necessary and integral part of the process – and one that is currently untested at mass-market volumes.

Q. PLEASE EXPLAIN.

A When a customer migrates to UNE-L, a transaction must be sent to NPAC to identify the "destination" switch for calls to this number. BellSouth initiates this transaction by creating a "10 digit trigger" in the donor (losing) switch at the time the UNE-L order is created. The trigger will cause incoming calls to "dip" into the NPAC database to determine the switch that now houses the number. The CLEC initiates the second step of this process when it receives notification from BellSouth that the cut has been completed. The CLEC then sends a transaction to NPAC to claim the number. Until the CLEC claims the number in the NPAC database, the customer will be unable to receive any incoming telephone calls. Thus, while a customer will be able to call 911 before the porting activity is complete, he or she will not be able to receive a call back until the transaction is sent and the number is distributed to all the switches in the network. If the NPAC transaction is not completed successfully -- for example, if the NPAC system is down, the request is formatted incorrectly, one of the switches in the network is slow to or unable to update, or BellSouth has not notified the CLEC that the cut is complete -- the customer will not be able to receive calls or voice mail messages, since calls will be directed to the incorrect home switch Incoming callers will hear a message stating that the line has been disconnected, leading to more confusion and problems. It is essential that the NPAC process be coordinated and successful If it is not, consumers could experience service problems that do not exist today with UNE-P.

The LNP process becomes even more complicated when a UNE-L customer migrates to a second CLEC. When the customer changes carriers again,

the losing carrier must "unlock" the existing record to allow the winning carrier to "replace" it with its destination code. Both churn and the addition of the ability for customers to migrate their numbers between wireless carriers and from wireline to wireless carriers will raise the number of transactions processed by the NPAC tremendously. It is unclear whether NPAC will be able to handle the volumes of transactions that would occur in a dynamic UNE-L market In addition, the error checking rules for the NPAC are unclear and must be tested to ensure that the correct numbers are ported. If NPAC cannot handle the volumes or error rates are significant, changes to the NPAC process will undoubtedly prove necessary.

The current experience of customers trying to port their number between wireless carriers provides a good example of the problems that are occurring in the local number portability process The number portability problems are causing many customers to carry two telephones, one from their new provider and one from their old provider, to ensure that they will continue to receive calls While this is merely inconvenient to wireless customers (and more expensive than necessary) customers can still receive calls directed to their number. With wireline local number portability, customers would have no work-around to receive calls until the number was properly ported over to the carrier providing dial tone via a UNE-L loop to the residence.

Q. DOES MCI HAVE ANY SUGGESTED RESOLUTION TO THIS ISSUE?

A Yes. MCI recommends that the Authority address this issue in a workshop with BellSouth, CLECs, the NPAC administrator (Neustar) and representatives of

NANPA, the National Numbering Plan Administrator, which manages and develops requirements for the NPAC database, to determine NPAC's actual capabilities and to develop metrics for the completion of number portability tasks in a UNE-L environment. Today's NPAC forecasting process does not include all CLECs and thus does not provide the information necessary to determine the volumes of numbers that will require porting once CLECs move to UNE-L. This could significantly impact the NPAC and thus consumers. Volume testing or scalability analysis also will be required to determine whether NPAC actually can handle the volumes of numbers that will be ported in a single day. Since a failure of the NPAC system will have a direct negative impact on customers, it is critical that the movement to UNE-L for mass markets customers not take place until all parties are clear that the system can support the increased volumes.

Q. ARE THERE ISSUES WITH LIDB AND CNAM?

A. Yes. The LIDB and CNAM databases provide information on caller identity and blocking options. UNE-P customers today use the LIDB and CNAM databases provided by the ILEC, so that unless a CLEC customer chooses new blocking options when he or she migrates, no changes are required to his or her LIDB and CNAM information. When a customer migrates a telephone number to a facilities-based carrier, however, the losing company deletes the customer's information from the LIDB and CNAM databases and the acquiring carrier loads that information.

LIDB and CNAM are essential databases Customer information for migrating customers whose LIDB and CNAM information is not loaded on time

or is incorrect will have blank or incorrect calling name displays for caller ID or will have blocking options loaded incorrectly. This could lead to calls being blocked by the called party due to missing information or to the improper rejection of third party billed calls.

Q. WHY IS MCI CONCERNED ABOUT CNAM PROBLEMS?

A. CLECs either must create CNAM data from published sources (which can result in a substandard database) or dip the ILEC systems to receive the data at a per dip rate. The CNAM database stores the information used to provide caller ID information If this information is not provided, calls from CLEC customers to customers with features like anonymous call rejection cannot be completed; that is, the "anonymous call" will be rejected Because UNE-L CLECs will have to develop their own CNAM databases from published sources (or pay the higher charge for a non-TELRIC priced database dip), this information will not necessarily mirror that provided when the customer was served by UNE-P, causing customer confusion, increased trouble calls, and potentially leading the customer to return to the ILEC.

Q. CAN YOU GIVE US AN EXAMPLE OF THIS PROBLEM?

A Certainly. If a customer has a "non-published" but "listed" number, that number will not appear in the phone book but will be available via caller ID. When MCI or another CLEC that relies on its own databases migrates this customer to UNE-L, this information will change, since the CLEC will have only the published source (the directory) from which to create the CNAM record After the customer is moved to UNE-L, calls from his telephone to other

customers will not display CNAM information and his calls may be rejected as "anonymous."

Q. DOES MCI HAVE A SOLUTION TO THIS PROBLEM?

A. Yes. MCI recommends that the ILEC create a wholesale CNAM information product at a just and reasonable rate. This product would allow CLECs to obtain a download of the ILECs' databases when using UNE-L to ensure that there is consistency of information and that callers are provided with the fully functional features that they require. In addition, all of the parties, both vendors and the ILEC, need to examine the increase in LIDB and CNAM data volumes that they will have to handle to determine whether existing processes are sufficient In addition, current processes for error checking and reject handling must be followed or new processes developed -- issues that were never addressed with UNE-P because the ILEC systems were used.

Q. WHAT ISSUES FOR UNE-L MUST BE RESOLVED CONCERNING DIRECTORY LISTING AND DIRECTORY ASSISTANCE?

A. With UNE-L, CLECs must send directory listing information to BellSouth to include in both the printed and on-line directories of each company. This step occurs as part of the UNE-L migration order

Q. DO CHANGES TO DL/DA OCCUR WITH UNE-P?

A No. No changes are necessary in a migration to UNE-P.

Q. DO THEY OCCUR FOR UNE-L?

A Yes. The CLEC completes the directory listing form and sends it with its order to BellSouth for processing. While an "as is" (*i.e.*, no change) directory listing can

be ordered from BellSouth as part of the "first" retail to UNE-L migration or UNE-P to UNE-L conversion, "as is" directory listings may not be appropriate for subsequent changes, which means that the winning CLEC must provide complete directory listing information for the customer, thereby increasing the likelihood of errors or deletions in the directory as it is "opened" to remove listings and "closed" to put the same listings back in. Again, the sheer volume of directory changes to be processed if UNE-L were to become a viable mass-market service delivery method could have significant impacts on the directory publishing and operator services databases.

Q. DOES MCI HAVE A PROPOSED RESOLUTION OF THIS ISSUE?

A Yes MCI recommends that "migrate as is" functionality for directory listings be available for CLEC-to-CLEC migrations as well as for BellSouth-to-CLEC migrations to limit the number of times that this information must be added and deleted.

Q. DO THESE INFORMATION EXCHANGE ISSUES HAVE A SIGNIFICANT EFFECT ON CUSTOMERS IN A UNE-L ENVIRONMENT?

A. Yes. All of these customer record and information changes must take place as efficiently and seamlessly as possible in a UNE-L environment. It is critical that these various orders and transfers of information be coordinated to the greatest extent possible throughout the various systems and processes of each provider and between providers A lack of coordination could result in errors in the customer records, the loss of customer data and loss of dial tone.

Batch Hot Cut Process

Q. THE FCC REQUIRES THE STATES TO APPROVE AND IMPLEMENT A "BATCH" HOT CUT PROCESS. WHAT IS THE PURPOSE OF THE "BATCH" HOT CUT PROCESS?

A. In an effort to alleviate some of the operational barriers to UNE-L recognized by the FCC, the *Triennial Review Order* requires that the states approve a batch hot cut process ("Transition Batch Hot Cut Process") to transition UNE-P customers to UNE-L by cutting over unbundled loops in high volumes from BellSouth to CLECs (*See, e.g.*, *Order* ¶¶ 487-490) The FCC expected that such a process would enable groups of UNE-P customers to be transitioned to UNE-L simultaneously in batches, thus "result[ing] in efficiencies associated with performing tasks once for multiple lines that would otherwise have been performed on a line-by-line basis." (*Order* ¶ 489.) Yet although the FCC recognized that such "a seamless, low-cost batch cut process for switching mass market customers from one carrier to another is necessary, at a minimum, for carriers to compete effectively in the mass market," it did not view this transitioning process as a panacea (*See, e g.*, *Order* ¶¶ 423 (describing the batch process as mitigating, not necessarily eliminating impairment), 487) Indeed, because this Transition Batch Hot Cut Process only addresses the issue of transitioning to UNE-L the base of customers that competitors like MCI have acquired on UNE-P, it is merely a discrete piece of the much larger puzzle that must be assembled before UNE-L can be seen as a viable service delivery method. In practical terms, eliminating the operational barriers associated with

the every day hot cut process ("Mass Market Hot Cut Process"), which will be used to move customers to and from multiple carriers in a dynamic competitive market, is at least as critical if not more critical than implementing a Transition Batch Hot Cut Process that is only useful for simultaneously moving batches of UNE-P customers to UNE-L.

Q. THE FCC ALSO REFERS TO THE CONCEPT OF "ROLLING ACCESS" IN ITS ORDER. WHAT IS "ROLLING ACCESS"?

A. In the *Triennial Review Order*, the FCC raises the possibility of a state Authority granting CLECs "rolling access" to mass market switching, if the state Authority determines that such access would cure a finding of CLEC impairment. (*See Order* ¶¶ 521-524) With rolling access, CLECs would have "access to unbundled local circuit switching for a temporary period [at least 90 days], permitting carriers first to acquire customers using unbundled incumbent LEC local circuit switching and later to migrate these customers to the competitive LECs' own switching facilities." (*Order* ¶¶ 521, 524.) In other words, rolling access would allow CLECs to use UNE-P to acquire customers at the outset, but then would require the CLECs to transition (that is, "roll off") those customers to UNE-L within a specified period after acquisition. Theoretically, this process would enable CLECs to avoid the delays and disruptions of service that would occur if CLECs had to acquire customers via UNE-L at the outset, because the customers would be first acquired and then transferred to UNE-L via the Transition Batch Hot Cut Process.

Q. WILL ROLLING ACCESS CURE THE OPERATIONAL BARRIERS FACING A MOVE TO UNE-L?

A No, as this description makes clear, rolling access does not remove the operational impairments presented by the everyday Mass Market Hot Cut Process, because it is simply a delayed batch hot cut process, one that focuses solely on transferring UNE-P customers to UNE-L. As I discuss above, the Mass Market Hot Cut Process will be essential for all customer transfers other than those from UNE-P to UNE-L For instance, even if CLECs have rolling access, they will not be able to rely on the Transition Batch Hot Cut Process for CLEC-to-CLEC UNE-L migrations Instead, when a customer wished to be migrated from a UNE-L CLEC, the customer first would have to be changed back to UNE-P so the customer could then be moved to the winning carrier This situation would be the worst of all operational worlds Therefore, regardless of whether the Transition Batch Hot Cut Process or rolling access addresses some aspects of CLEC impairment, it is critical that state Authoritys investigate and resolve the substantial operational barriers associated with the Mass Market Hot Cut process as well.

Q. WHAT THEN SHOULD THE AUTHORITY DO WITH RESPECT TO THE HOT CUT PROCESS?

A. Although the Authority must comply with the FCC's requirement that it evaluate, approve and implement a Transition Batch Hot Cut Process, that task should not distract the Authority from working toward alleviating the distinct operational issues associated with the Mass Market Hot Cut Process The Transition Batch

Hot Cut Process necessarily will require a number of coordinated steps and scheduling with BellSouth, and thus substantial BellSouth involvement and oversight. In contrast, the Mass Market Hot Cut Process will need to be a standardized, simple, and low-cost process that can take place on a day-to-day basis. And it will have to process migrations to and from retail, UNE-P, and resale customers, as well as disconnections, suspensions, and feature additions and changes. Thus, although a batch hot cut process may be helpful, it simply will not address the everyday operational barriers that exist in migrating customers from one UNE-L CLEC to another, from BellSouth to a UNE-L CLEC, and from a UNE-L CLEC to BellSouth. To address these more fundamental difficulties with UNE-L migrations, BellSouth must streamline the standard Mass Market Hot Cut process as well, so that it is as effective, efficient, seamless, low cost and scalable as possible, but without the special scheduling and BellSouth handling necessary for the Transition Batch Hot Cut Process. It is only when day-to-day migrations among all carriers, using all service delivery methods, take place quickly, efficiently and successfully, that a truly competitive market will exist. MCI discusses in detail its hot cut proposals in its Network Impairment Testimony.

Q. HAS BELLSOUTH RECENTLY BEGUN TO EXPRESS WILLINGNESS TO IMPROVE ITS EXISTING BATCH ORDERING PROCESS?

A Yes. On January 31, 2004, BellSouth announced that it will make changes to its batch ordering process to alleviate some of the CLECs' concerns with its accuracy and timeliness These changes include developing the on-line provisioning status

tool requested by MCI, a shorter migration interval based on reducing the time required to "negotiate" with the BellSouth project manager, a due date scheduling system, and a process to migrate customers to EELs. BellSouth has proposed to make these changes by the end of July 2004, but has not yet provided the detail necessary to evaluate them. And while the changes sound promising, it appears that BellSouth has not lifted the unnecessary requirement for creating a manual spreadsheet listing the lines that will be migrated or for "negotiating" the due dates for orders with the Project Manager. MCI recommends that BellSouth be required to participate in a Authority-sponsored workshop to examine this process and determine what additional requirements will be necessary to ensure that UNE-P customers can be transitioned smoothly to UNE-L. In addition, the Authority should not approve this "new" process until it is formally documented, explained and tested

Q. HAVE OTHER ILECS WORKED WITH CLECS TO CREATE A BATCH MIGRATION PROCESS?

A. Yes. SBC, Verizon, and Qwest have had ongoing collaboratives to work with CLECs to develop a batch migration process. SBC, Qwest, and Verizon have proposed automated processes that will allow the CLEC to select a due date for its orders and automated tools to track orders. Verizon's tool, WPTS, is already available, while SBC and Qwest have committed to implementing the OSS changes necessary for these automated tools by the end of 2004. BellSouth's promise of a new process needs to be backed up by documentation, explanation, and a plan for deployment and testing.

Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY.

A One of the major issues in this proceeding is whether operational impairment exists. For the reasons I have outlined, and the ones described in MCI's network operational testimony, it clearly does But determining that operational impairment exists is the easy part of the Authority's job. The more difficult part is working with the industry to ensure that the barriers are removed. I have presented some approaches to known operational problems that should help the Authority and the industry progress toward making UNE-L operationally feasible for CLECs. As these problems and new ones that arise are addressed and remedied, the industry can begin to make UNE-L a reality.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Retail to UNE-P Migration

- The CLEC issues a single UNE-P local service request ("LSR") to the ILEC following the prescribed Ordering and Billing Forum ("OBF") procedures. This LSR is issued using electronic data interface ("EDI") or the ILEC-provided graphical user interface ("GUI"). The CLEC need only provide the customer's name and telephone number. Directory listings can remain the same, and service address information and E911 information are not required by the ILEC.

- The ILEC EDI translator checks the order to ensure that key fields are correct and, via the same computer system, returns a Firm Order Confirmation ("FOC") or an electronic error message (reject or clarification) to the CLEC. The FOC provides the due date for the completion of the programming necessary to complete the order.

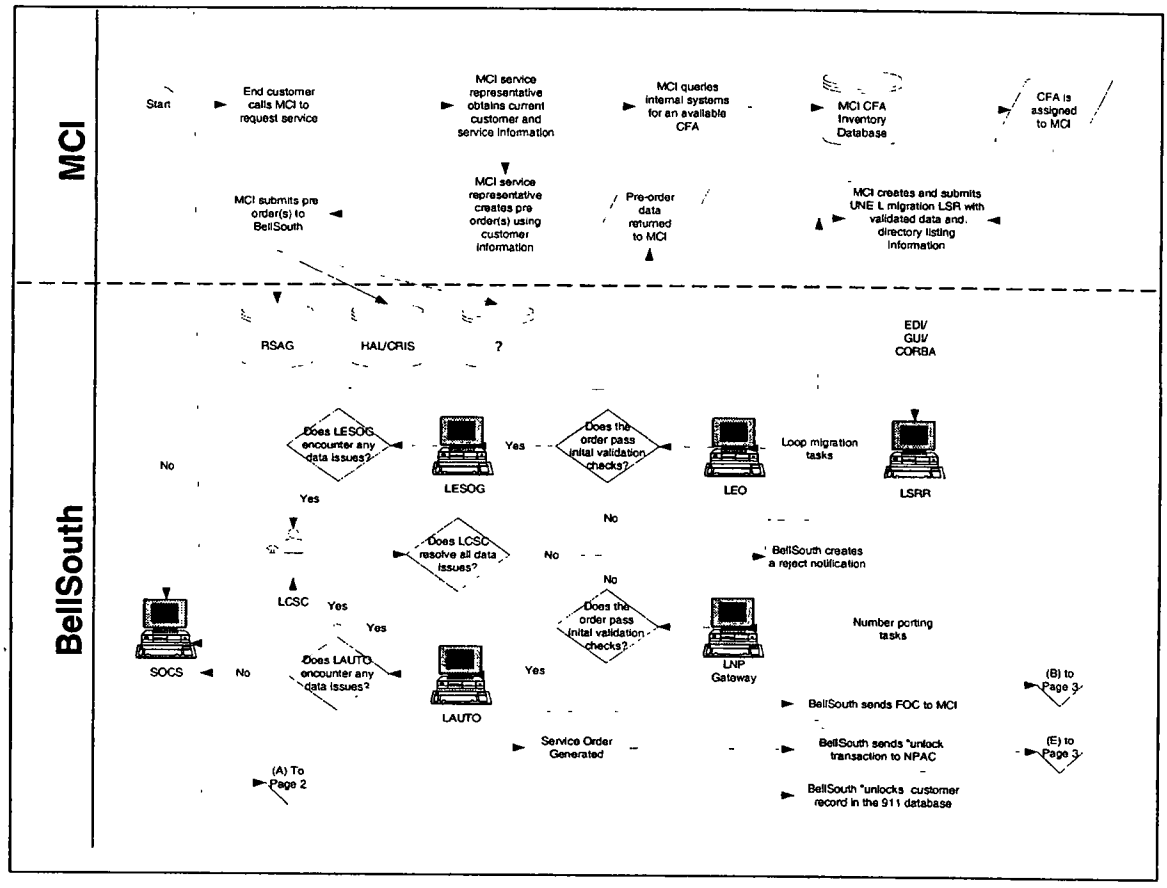
- If an error message is issued, the CLEC must resubmit the order, restarting the process.

- The order then electronically "flows through" to the ILEC service order processor, where the internal service orders necessary to make the switch programming changes and billing changes necessary for the migration to UNE-P are generated. Flowthrough ensures that errors are minimized by allowing the service orders to be created mechanically, rather than typed by a service representative. Most ILECs are now achieving well more than 90% flowthrough for standard UNE-P POTS service orders.

- The ILEC internal service orders initiate the internal service order provisioning process, including the implementation of switch feature changes. Migration orders do not require the dispatch of technicians to the frame because the programming changes are made at the switch and can be completed totally electronically. The physical facilities (loop and cross connect) are not changed in any way.

- Once the switch translations work is complete, the internal ILEC systems send the CLEC a Service Order Completion ("SOC") notifier. At this point, the customer has "migrated" to the CLEC.

- The ILEC completes its internal migration process by updating its internal customer service records ("CSR") and billing records to stop billing the customer directly and to begin issuing wholesale bills to the CLEC. Some ILECs also send a second notifier, the Billing Completion Notifier, ("BCN") to the CLEC. This final notifier is generally sent between 1 to 5 days after the internal ILEC billing systems are updated and confirms to the CLEC that the customer has been migrated and billing can begin.


MCI
BellSouth
Start
End customer calls MCI to request service
MCI service representative obtains current customer and service information
MCI queries internal systems for an available CFA
MCI CFA Inventory Database
CFA is assigned to MCI
MCI submits pre order(s) to BellSouth
MCI service representative creates pre order(s) using customer information
Pre-order data returned to MCI
MCI creates and submits UNE L migration LSR with validated data and directory listing information
RSAG
HAL/CRIS
?
EDI/ GUI/ CORBA
Does LESOG encounter any data issues?
LESOG
Yes
No
Does the order pass inital validation checks?
LEO
Loop migration tasks
LSRR
Yes
No
LCSC
Does LCSC resolve all data issues?
No
BellSouth creates a reject notification
No
Yes
Yes
Does the order pass inital validation checks?
LNP Gateway
Number porting tasks
SOCS
No
Does LAUTO encounter any data issues?
LAUTO
Yes
(B) to Page 3
BellSouth sends FOC to MCI
Service Order Generated
BellSouth sends "unlock transaction to NPAC
(E) to Page 3
BellSouth "unlocks customer record in the 911 database
(A) To Page 2

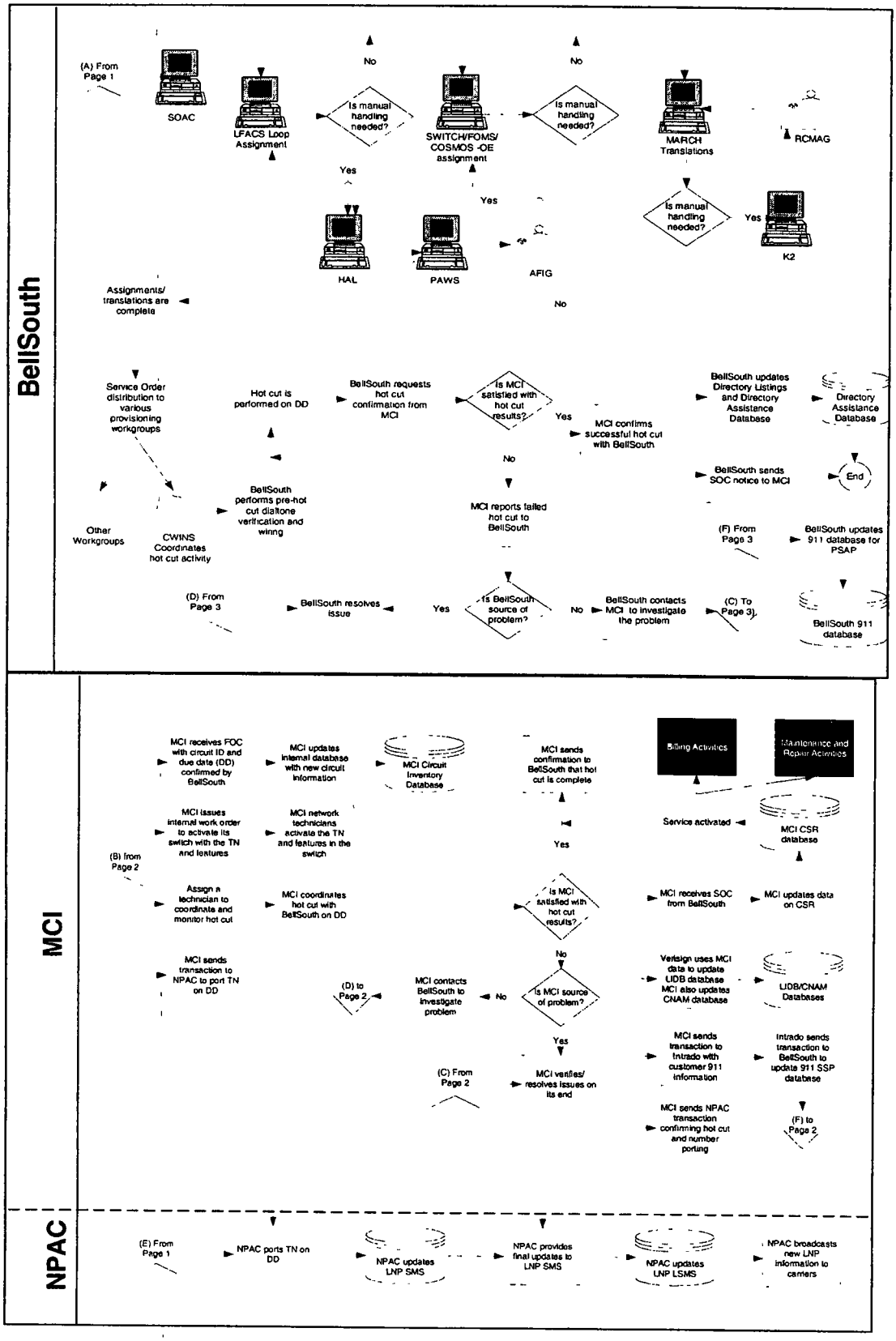

BellSouth
(A) From Page 1
SOAC
LFACS Loop Assignment
Is manual handling needed?
No
SWITCH/FOMS/ COSMOS -OE assignment
Is manual handling needed?
No
MARCH Translations
RCMAG
Yes
Yes
Is manual handling needed?
Yes
K2
HAL
PAWS
AFIG
No
Assignments/ translations are complete
Service Order distribution to various provisioning workgroups
Hot cut is performed on DD
BellSouth requests hot cut confirmation from MCI
Is MCI satisfied with hot cut results?
Yes
MCI confirms successful hot cut with BellSouth
BellSouth updates Directory Listings and Directory Assistance Database
Directory Assistance Database
BellSouth sends SOC notice to MCI
End
No
MCI reports failed hot cut to BellSouth
BellSouth performs pre-hot cut dialtone verification and wiring
Other Workgroups
CWINS Coordinates hot cut activity
(F) From Page 3
BellSouth updates 911 database for PSAP
(D) From Page 3
BellSouth resolves issue
Yes
Is BellSouth source of problem?
No
BellSouth contacts MCI to investigate the problem
(C) To Page 3
BellSouth 911 database
MCI
MCI receives FOC with circuit ID and due date (DD) confirmed by BellSouth
MCI updates internal database with new circuit information
MCI Circuit Inventory Database
MCI sends confirmation to BellSouth that hot cut is complete
Billing Activities
Maintenance And Repair Activities
Service activated
MCI CSR database
MCI issues internal work order to activate its switch with the TN and features
MCI network technicians activate the TN and features in the switch
(B) from Page 2
Yes
Assign a technician to coordinate and monitor hot cut
MCI coordinates hot cut with BellSouth on DD
Is MCI satisfied with hot cut results?
MCI receives SOC from BellSouth
MCI updates data on CSR
MCI sends transaction to NPAC to port TN on DD
No
Verisign uses MCI data to update LIDB database MCI also updates CNAM database
LIDB/CNAM Databases
(D) to Page 2
MCI contacts BellSouth to investigate problem
No
Is MCI source of problem?
MCI sends transaction to Intrado with customer 911 information
Intrado sends transaction to BellSouth to update 911 SSP database
Yes
(C) From Page 2
MCI verifies/ resolves issues on its end
MCI sends NPAC transaction confirming hot cut and number porting
(F) to Page 2
NPAC
(E) From Page 1
NPAC ports TN on DD
NPAC updates LNP SMS
NPAC provides final updates to LNP SMS
NPAC updates LNP LSMS
NPAC broadcasts new LNP information to carriers

Exhibit SL-2

Retail to UNE-L Migration

- The CLEC issues an electronic order to the ILEC requesting that the customer be moved from the ILEC switch to the CLEC switch. Unlike a UNE-P order which requires only the customer's name and telephone number and the features that the customer will be purchasing, the UNE-L order must include the customer's name and telephone number (some companies may require more), and information on the collocation cage to which the loop will be transferred and the channel facility assignment (pair) to which the loop will be terminated.

- The CLEC also will create internal orders to send to the National Number Portability Assignment Center the LIDB provider, and the E911 center serving the customer to establish ownership of the customer's number at the appropriate time. These orders must be timed to coordinate with the orders issued by the ILEC. For example, the ILEC order to unlock the E911 database should be complete prior to the CLEC order to accept responsibility for the record and lock the database. These orders may fall out at any time causing additional customer problems.

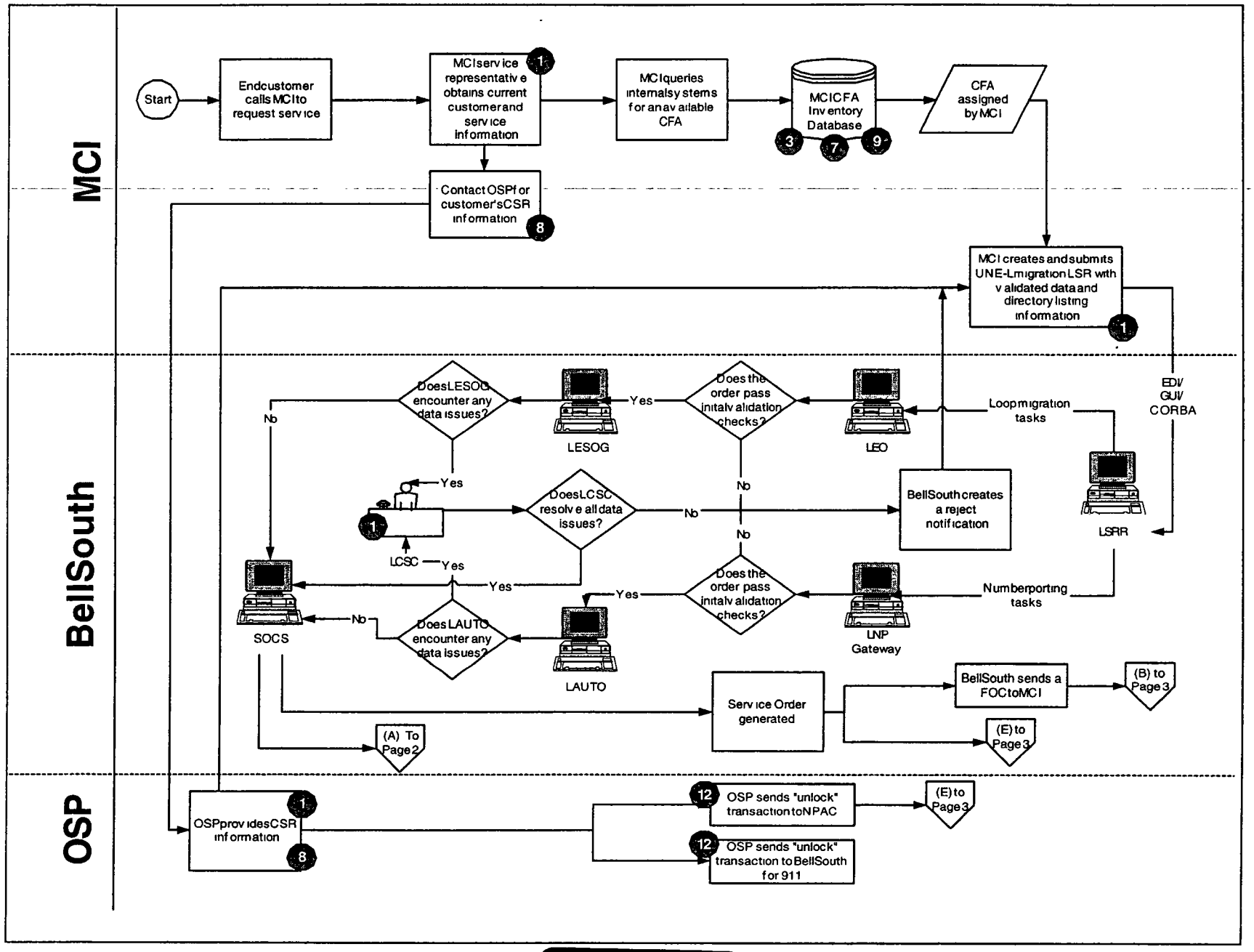
- The ILEC EDI translation software will accept or reject the order and return a FOC or clarification/reject to the CLEC. The ILEC service order processor may now be able to create the internal orders necessary to migrate the customer to UNE-L. If it cannot, the orders will need to be entered manually by service center personnel. Fallout rates for UNE-L orders are higher than those for UNE-P. If the order does not flow through the system, the ILEC service order personnel will need to type the orders. Unlike a UNE-P migration, multiple related service orders must be created for a UNE-L transition – generally, the local service center personnel must create a Disconnect (D) order to remove the customer from the ILEC switch; a New (N) order to move the loop from the MDF to the CLEC collocation equipment; and a Change (C) order to change the billing to the CLEC from UNE-P to UNE-L. Directory listing orders may also have to be created, as well as a request to unlock the E911 data base to allow the CLEC to "claim" the customer and a "trigger" order to route calls to the customer via the local number portability data base rather than the ILEC switch.

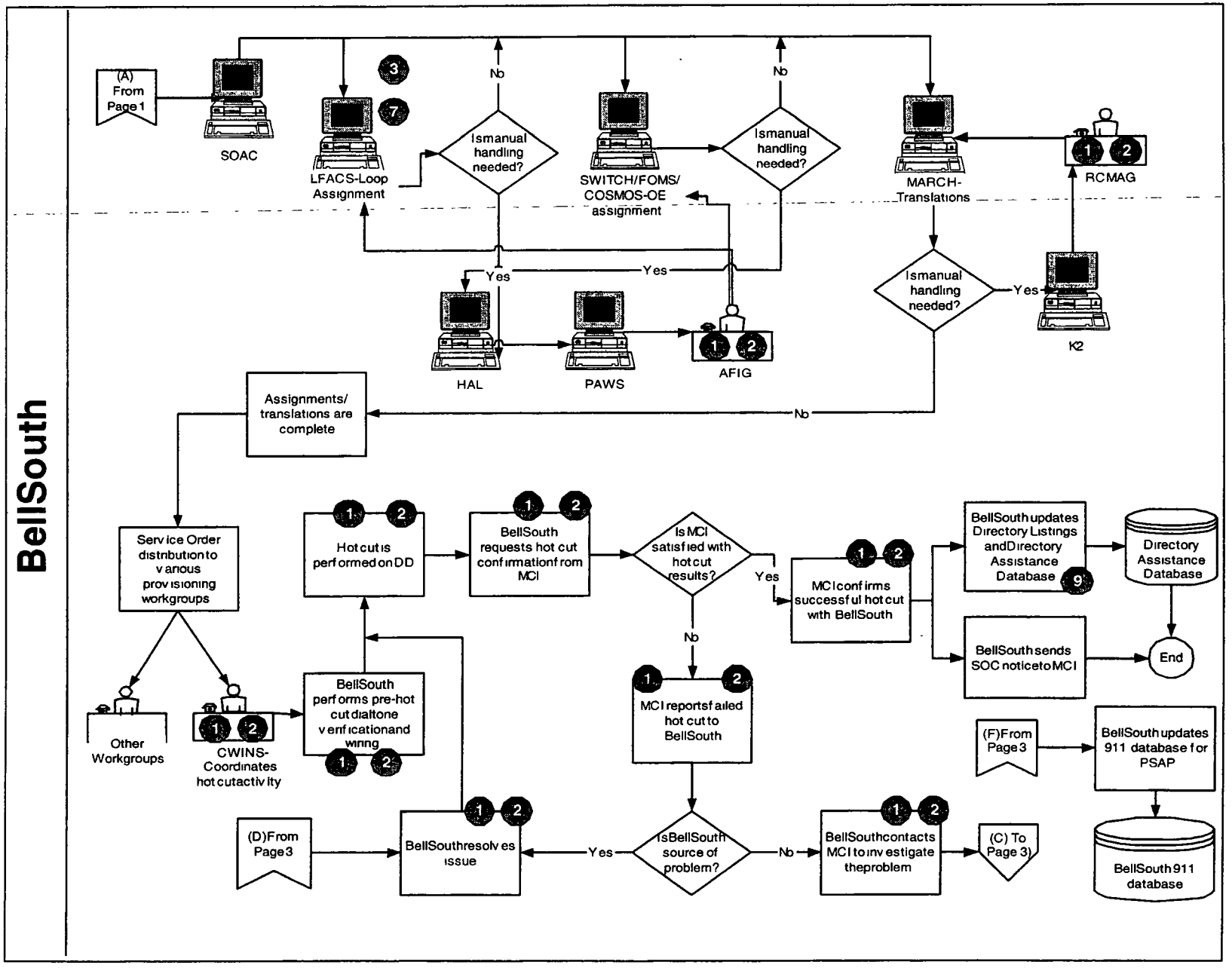
- The internal ILEC service orders are routed to the technicians responsible for the UNE-L cutover. These technicians must "find" the customer's circuit at the main distribution frame by manually clipping onto the loop and "listening" for dial tone, wire in a jumper cable which will allow the loop to be extended to the CLEC's collocation equipment, and prepare for the cutover. The frame personnel should also check for dial tone at the CLEC end of the collocation, ensuring that the CLEC switch will have dial tone for the customer when he/she migrates.

- On the day of the cut, the ILEC runs the jumper to the CLEC collocation cage and notifies the CLEC that the cut has been made. When the CLEC receives the cut notification, it must complete the local number portability transaction by issuing a "claiming" order to the NPAC. The customer will have dial tone during this

process but will be unable to receive calls until the NPAC transaction is completed.

- The ILEC will issue a service order completion notification to the CLEC.
- The ILEC will complete the internal work required to change the billing to the CLEC from UNE-P to UNE-L. The customer's CSR will be removed from the ILEC systems.


MCI
BellSouth
OSP
Start
End customer calls MCI to request service
MCI service representative obtains current customer and service information
MCI queries internal systems for an available CFA
MCI CFA Inventory Database
CFA assigned by MCI
Contact OSP for customer's CSR information
MCI creates and submits UNE-L migration LSR with validated data and directory listing information
Does LESOG encounter any data issues?
LESOG
Does the order pass initial validation checks?
LEO
Loop migration tasks
EDI/ GUI/ CORBA
LSRR
BellSouth creates a reject notification
Does LCSC resolve all data issues?
LCSC
SOCS
Does LAUTO encounter any data issues?
LAUTO
Does the order pass initial validation checks?
LNP Gateway
Number porting tasks
Service Order generated
BellSouth sends a FOC to MCI
(A) To Page 2
(B) to Page 3
(E) to Page 3
OSP provides CSR information
OSP sends "unlock" transaction to NPAC
OSP sends "unlock" transaction to BellSouth for 911
Yes
No


BellSouth
(A) From Page 1
SOAC
LFACS-Loop Assignment
Is manual handling needed?
No
SWITCH/FOMS/ COSMOS-OE assignment
Is manual handling needed?
No
MARCH-Translations
RCMAG
Is manual handling needed?
Yes
K2
Yes
Yes
HAL
PAWS
AFIG
Assignments/ translations are complete
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Service Order distribution to various provisioning workgroups
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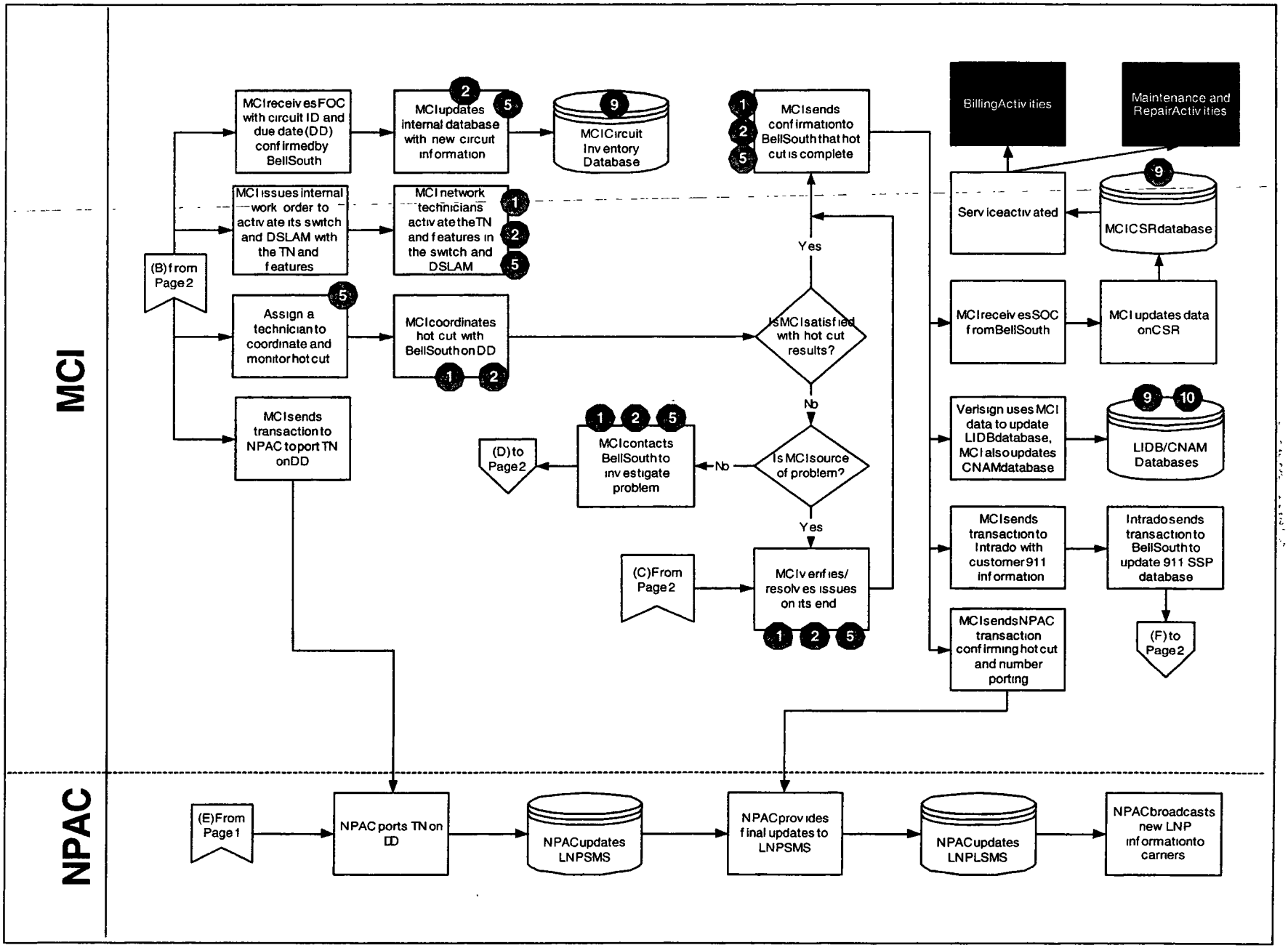
End
No
MCI reports failed hot cut to BellSouth
Other Workgroups
CWINS-Coordinates hot cut activity
BellSouth performs pre-hot cut dialtone verification and wiring
(D) From Page 3
BellSouth resolves issue
Yes
Is BellSouth source of problem?
No
BellSouth contacts MCI to investigate the problem
(C) To Page 3
(F) From Page 3
BellSouth updates 911 database for PSAP
BellSouth 911 database

Line-Splitting UNE-P CLEC to MCI UNE-L (Voice and Data) Migration (BellSouth)



Assumptions:

1) All customers migrating to MCI call into an MCI service center to order service.
2) All customers port their numbers.
3) MCI switches will provide all MCI UNE-L customer features.
4) Customers are not moving to new locations.
5) MCI uses a vendor, Intrado, to load 911 records to the PSAP.
6) MCI will maintain its own LIDB and CNAM databases. MCI uses a vendor, Verisign, to load LIDB data.
7) Scenarios are represented as "ideal" (not necessarily zero-defect): Each party has sufficient resources; each party sufficiently manages its responsibilities; no "one-off" circumstances are involved.
8) When translations are performed, BellSouth sets the AIN trigger.
9) As part of MCI's agreement with BellSouth, line loss reports will only be generated for loss of lines to other carriers. If MCI is converting customers from one UNE type to another, line loss reports will not be generated.
10) Provisioning flows are based in part on information obtained from the KPMG Consulting BellSouth-Florida OSS Report.
11) Only processes and systems that directly impact MCI or BellSouth are outlined.
12) For migrations involving DSL, voice and data are pre-wired together in MCI's collocation (DSLAM and Splitter), and inventoried and assigned as one assembly with one CFA.

Challenges:

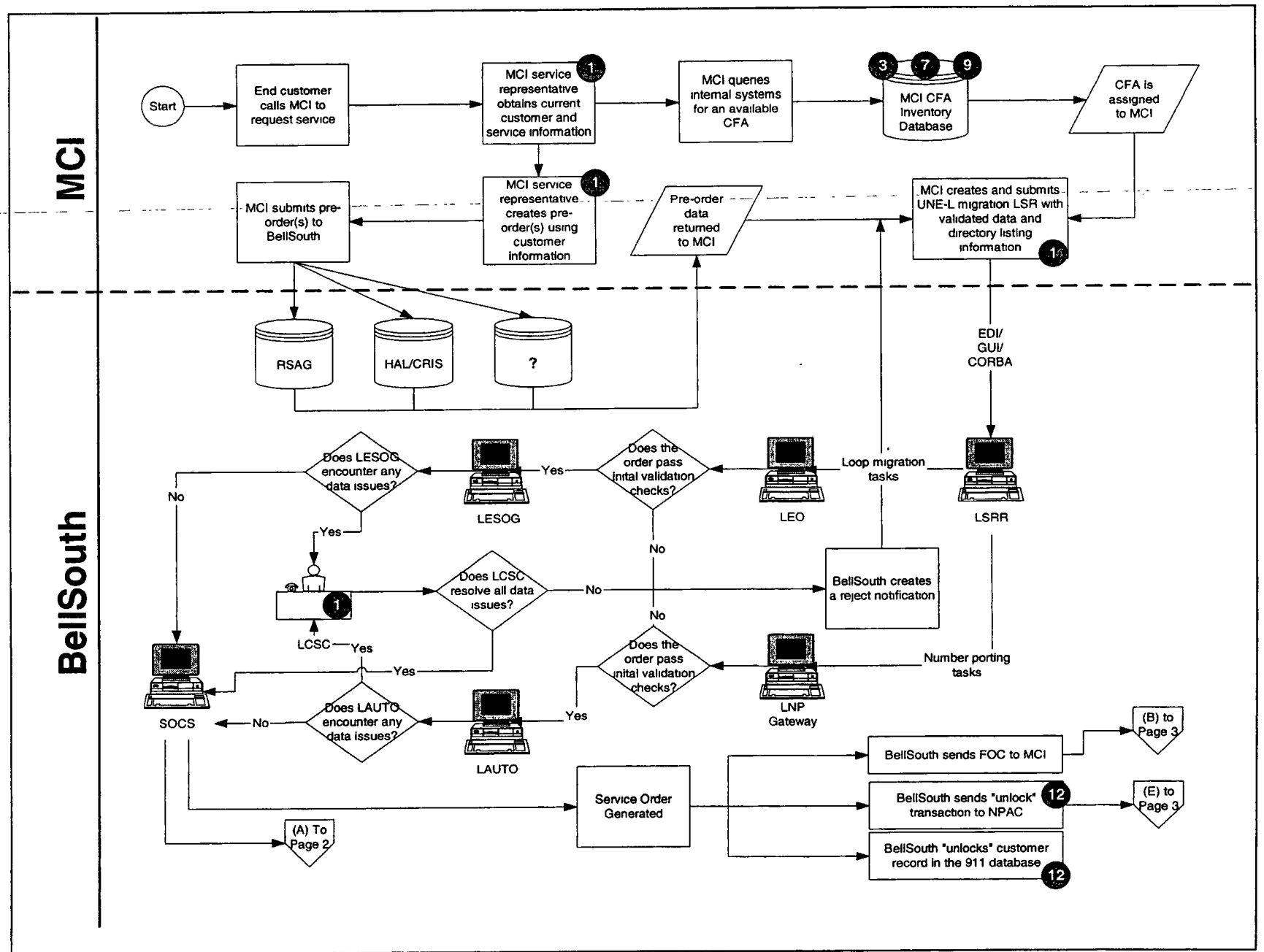
(The following challenges are based on the UNE-L Operational Analysis: Activity Two reports.)

1) Challenges associated with manual handling throughout ordering and provisioning processes.
2) Challenges associated with high steady-state provisioning volumes and the impact on systems and processes.
3) Challenges associated with facility availability.
4) Challenges associated with facility re-use.
5) Challenges associated with expanded MCI Provisioning Group responsibilities for UNE-L service.
6) Challenges associated with ordering and provisioning when IDLC service is present.
7) Challenges associated with data management specifically related to facility assignment and inventory.
8) Challenges associated with insufficient CLEC-to-CLEC interfaces and processes.
9) Challenges associated with data integrity.
10) Challenges associated with MCI LIDB/CNAM data management responsibilities.
11) Challenges associated with batch migration of customers from UNE-P to UNE-L service.
12) Challenges associated with number unlocking procedures for 911 and LNP.

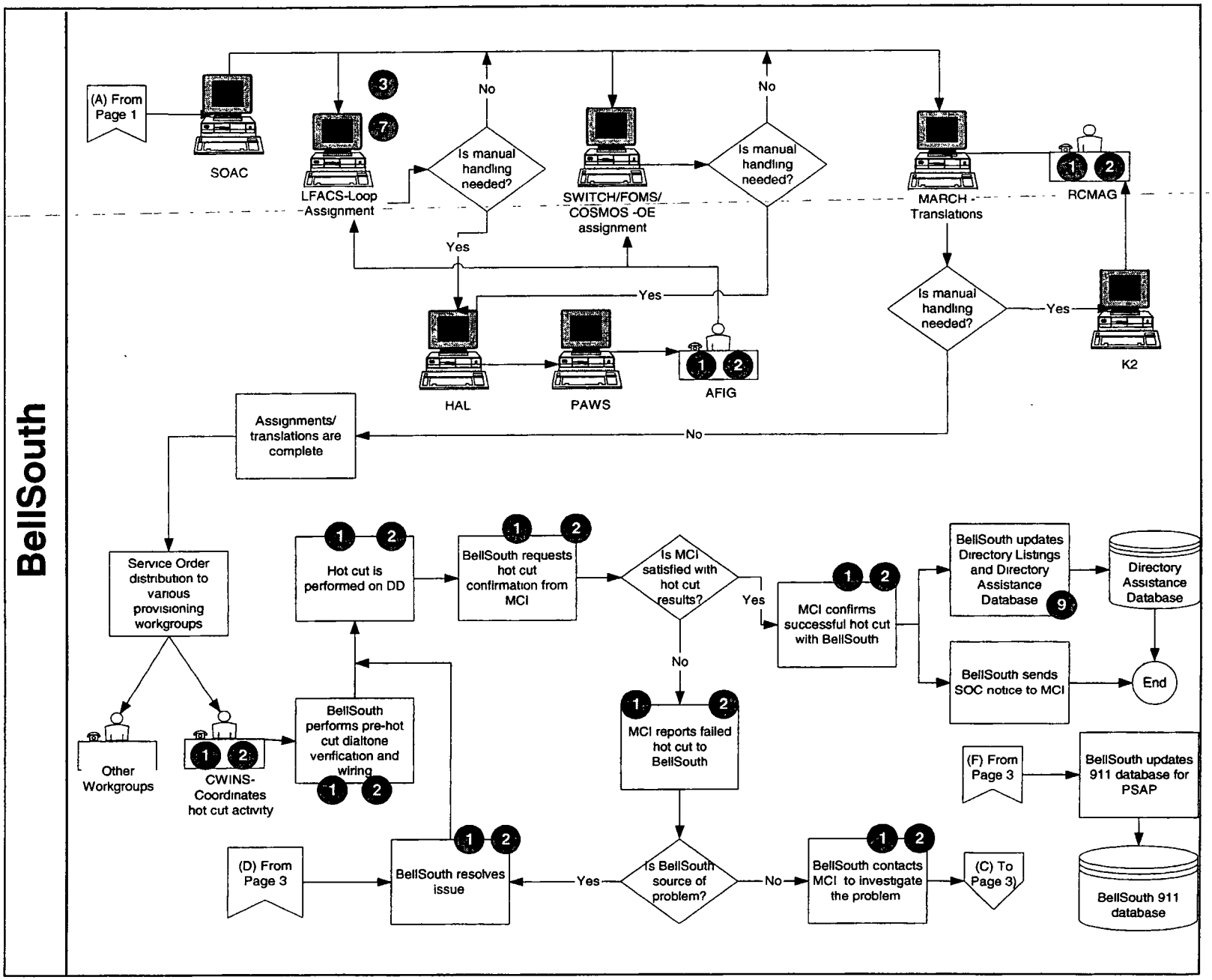
Glossary:

CAFE: Carrier Access Front End
CFA: Connecting Facility Assignment
CNAM: Customer Name Database
CORBA: Common Object Request Broker Architecture ordering interface
CPSS: Circuit Provisioning Status System
CPSS-TA· Circuit Provisioning Status System-Trouble Administration
CSOTS· CLEC Service Order Tracking System
DD: Due date
DSAP: Direct Order Entry (DOE) Support Application
ECTA: Electronic Communications Trouble Administration
FOC: Firm Order Confirmation
GUI: Graphical User Interface
HAL/CRIS: Hands-off Assignment Logic/Customer Record Information System
LAUTO: LNP Automation System
LCSC: Local Carrier Service Center
LFACS: Loop Facility Assignment and Control System
LENS: Local Exchange Navigation System (GUI ordering system)
LEO. Local Exchange Ordering System
LESOG: Local Exchange Service Order Generator
LIDB. Line Information Database
LNP: Line Number Portability
LSMS: BellSouth's LNP database, containing downloads from NPAC's LSMS
LSR· Local Service Request
LSRR. Local Service Request Router
MARCH: Memory Administration Recent Change History
NPAC· Number Portability Administration Center· Manages the LPN process
OE: Office Equipment
OSP: Old Service Provider, also known as the "Losing CLEC"
PAWS· Provisioning Analyst Workstation System provisioning system
PO: Pre-order
PSAP: Public Service Answering Point that receives and dispatches 911 calls
"Reverse" Hot Cut: Hot cut performed when ILEC "wins back" customer from CLEC, and reinstates retail service.
RSAG. Regional Street Address Guide
SMS: Service Management System: NPAC's system containing routing and LNP information
SOAC: Service Order Analysis and Control System
SOC: Service Order Confirmation
SOCS: Service Order Confirmation System
SSP. 911 Service Provider
SWITCH/FOMS. Frame Operations Management System
TAFI: Trouble Analysis Facilitation Interface
TAG/RoboTag: Telecommunications Access Gateway/Robust TAG

BellSouth Retail DSL-Capable Loop to MCI DSL-Capable Loop Migration



EXHIBIT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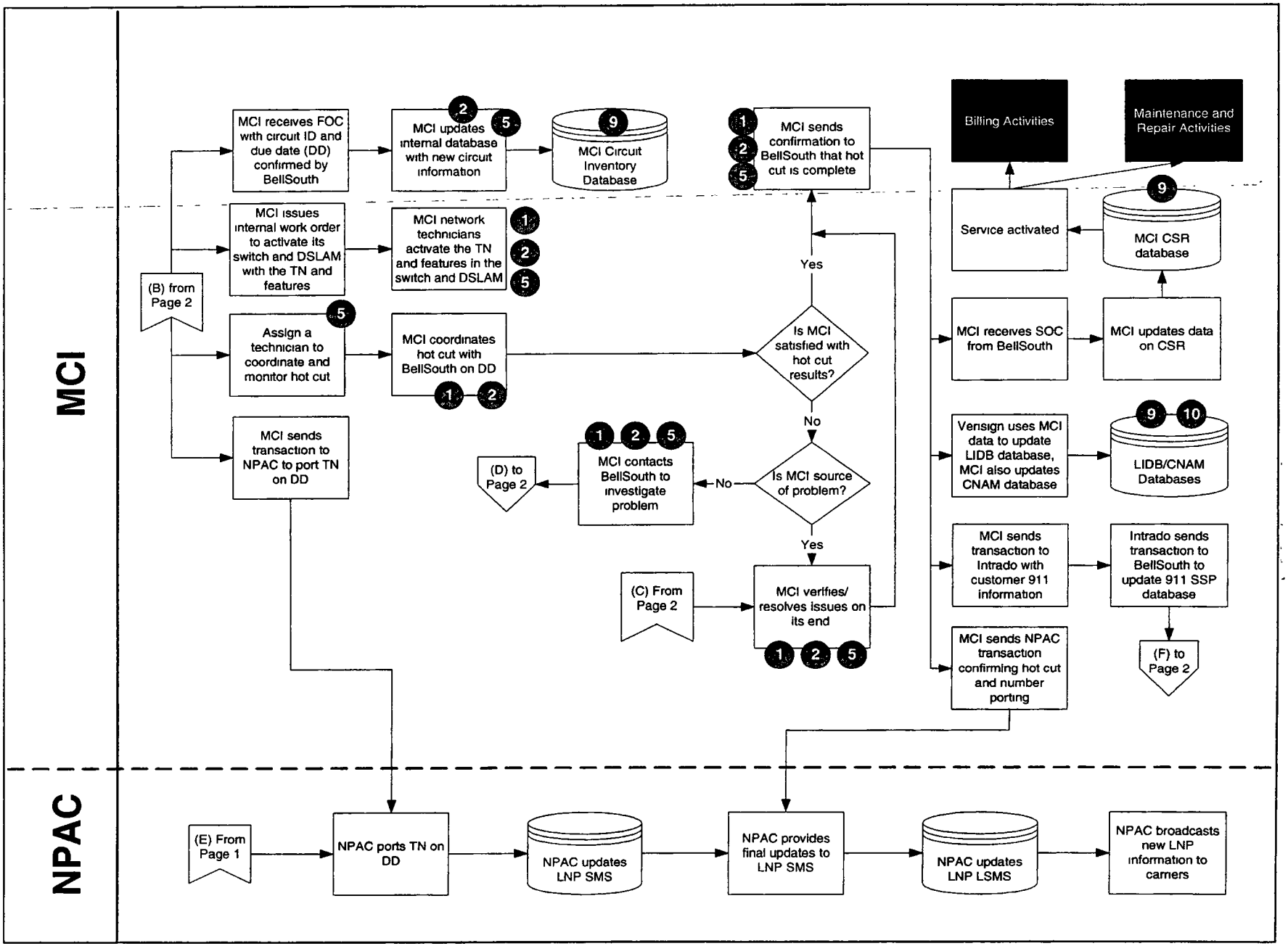
BellSouth requests hot cut confirmation from MCI
Is MCI satisfied with hot cut results?
Yes
No
MCI confirms successful hot cut with BellSouth
BellSouth updates Directory Listings and Directory Assistance Database
Directory Assistance Database
BellSouth sends SOC notice to MCI
End
Other Workgroups
CWINS- Coordinates hot cut activity
BellSouth performs pre-hot cut dialtone verification and wiring
MCI reports failed hot cut to BellSouth
(F) From Page 3
BellSouth updates 911 database for PSAP
BellSouth 911 database
(D) From Page 3
BellSouth resolves issue
Yes
Is BellSouth source of problem?
No
BellSouth contacts MCI to investigate the problem
(C) To Page 3)

BellSouth Retail DSL-Capable Loop to MCI DSL-Capable Loop Migration



Assumptions:

1) All customers migrating to MCI call into an MCI service center to order service.
2) All customers port their numbers.
3) MCI switches will provide all MCI UNE-L customer features.
4) Customers are not moving to new locations
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Challenges:

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4) Challenges associated with facility re-use.
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CAFE: Carrier Access Front End
CFA: Connecting Facility Assignment
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CORBA: Common Object Request Broker Architecture ordering interface
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SOCS. Service Order Confirmation System
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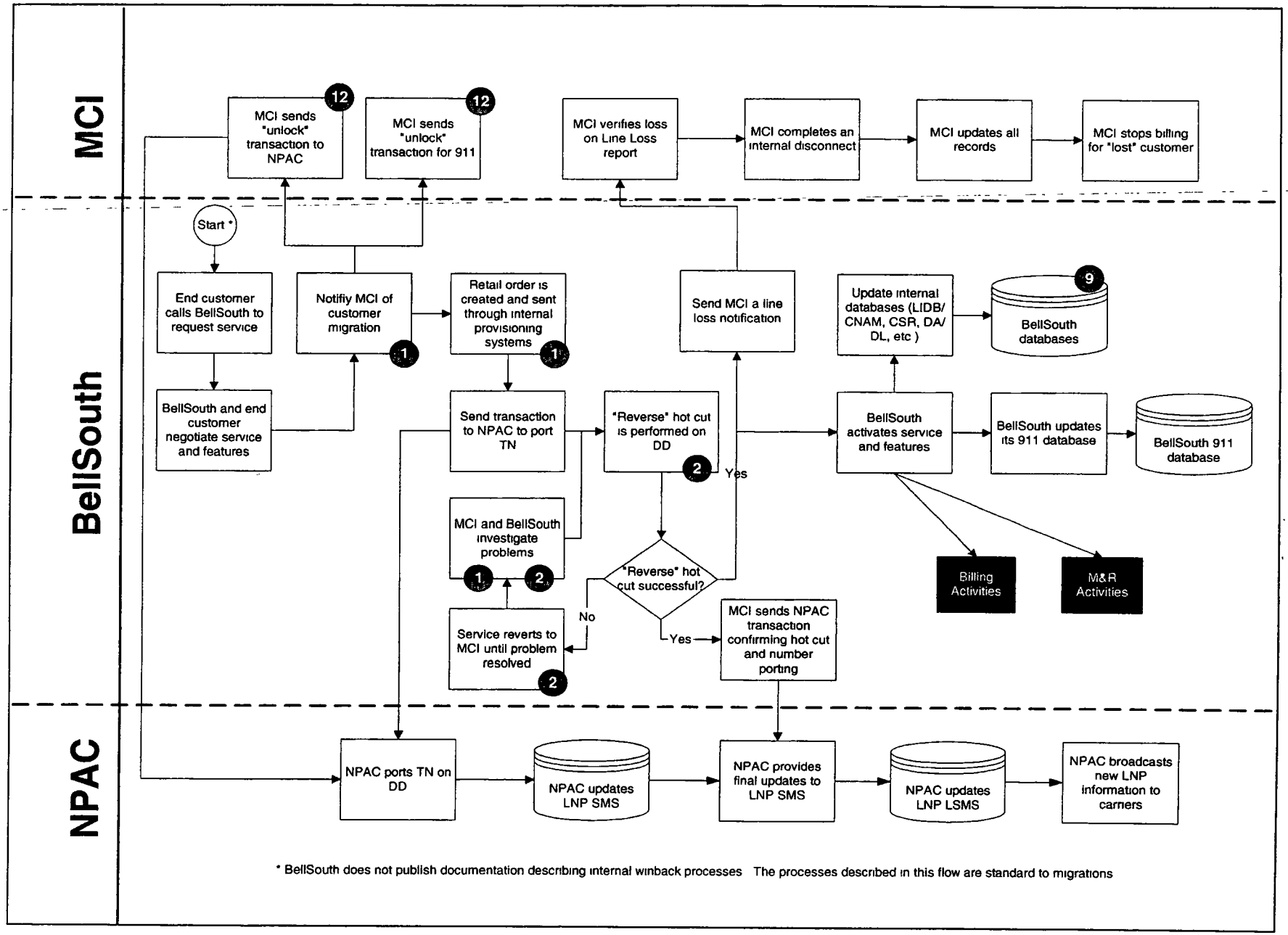
TAG/RoboTag Telecommunications Access Gateway/Robust TAG

Winback - MCI UNE-L to BellSouth Retail Migration



* BellSouth does not publish documentation describing internal winback processes The processes described in this flow are standard to migrations

EXHIBIT

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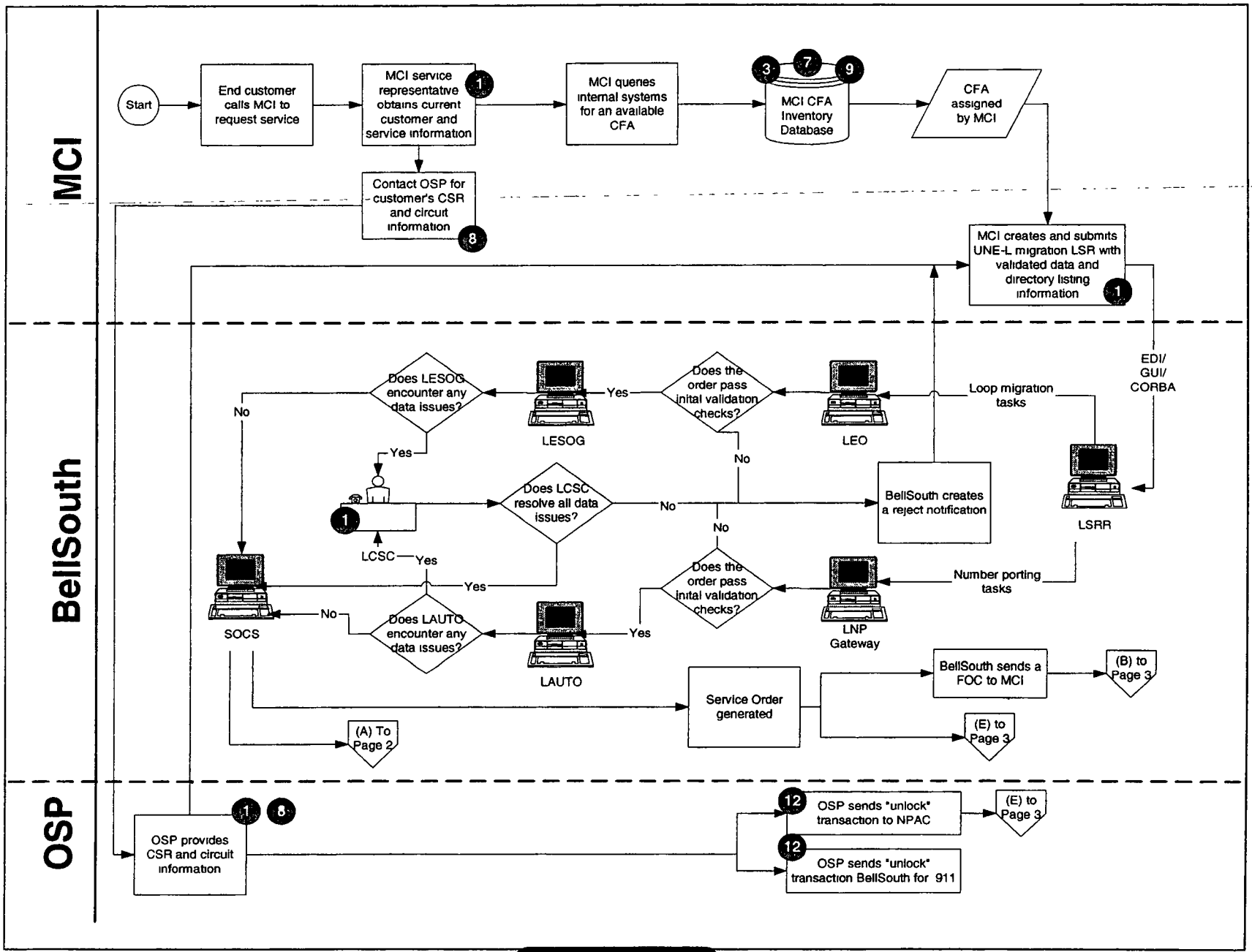
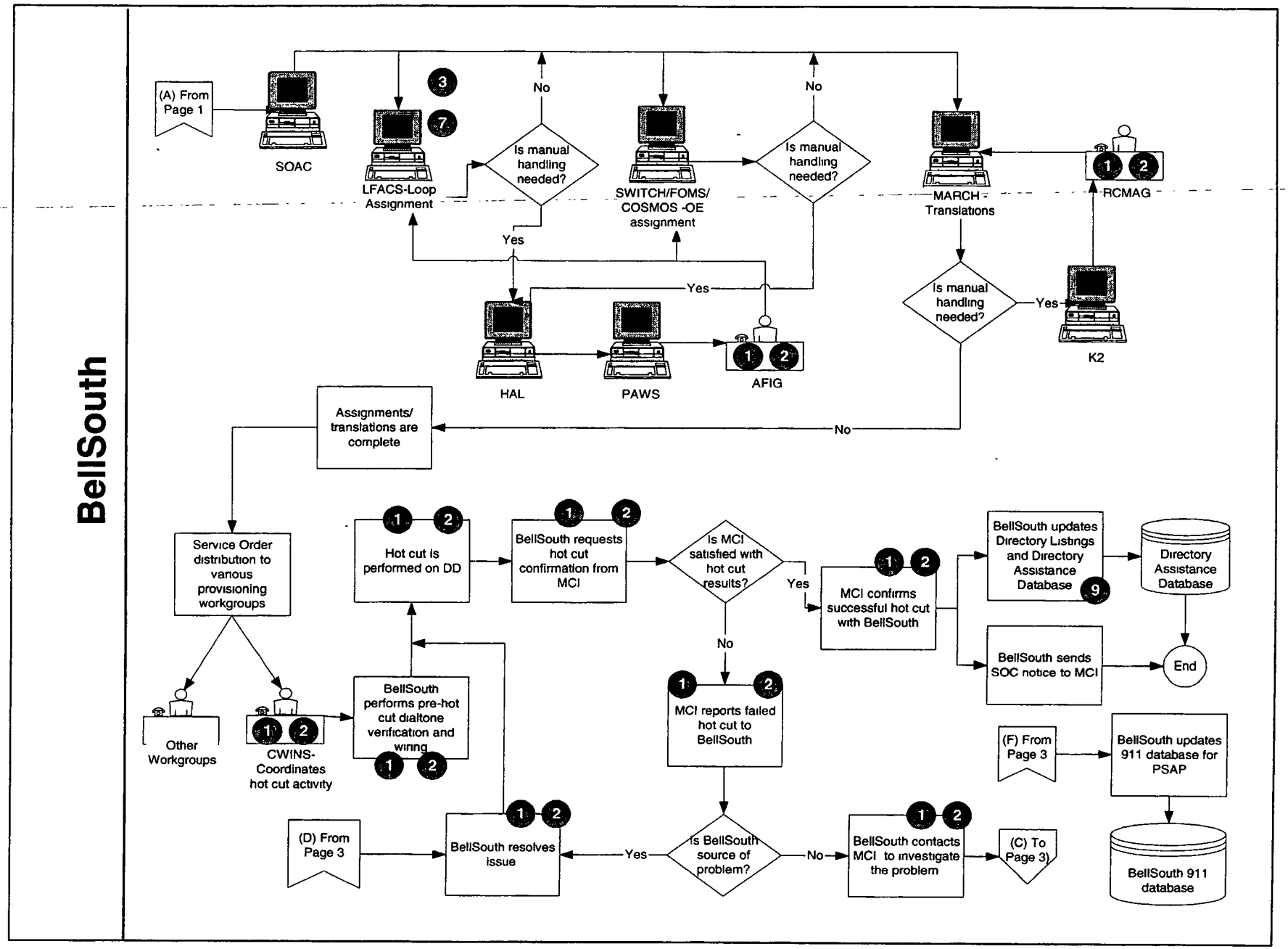

MCI
BellSouth
OSP
Start
End customer calls MCI to request service
MCI service representative obtains current customer and service information
MCI queries internal systems for an available CFA
MCI CFA Inventory Database
CFA assigned by MCI
Contact OSP for customer's CSR and circuit information
MCI creates and submits UNE-L migration LSR with validated data and directory listing information
EDI/ GUI/ CORBA
Loop migration tasks
Number porting tasks
Does LESOG encounter any data issues?
Does the order pass inital validation checks?
LESOG
LEO
LSRR
Does LCSC resolve all data issues?
BellSouth creates a reject notification
LCSC
SOCS
Does LAUTO encounter any data issues?
LAUTO
Does the order pass inital validation checks?
LNP Gateway
Service Order generated
BellSouth sends a FOC to MCI
(B) to Page 3
(E) to Page 3
(A) To Page 2
OSP provides CSR and circuit information
OSP sends "unlock" transaction to NPAC
OSP sends "unlock" transaction BellSouth for 911
(E) to Page 3
Yes
No

EXHIBIT


BellSouth
(A) From Page 1
SOAC
LFACS-Loop Assignment
Is manual handling needed?
No
SWITCH/FOMS/ COSMOS -OE assignment
Is manual handling needed?
No
MARCH - Translations
RCMAG
Is manual handling needed?
Yes
K2
Yes
HAL
PAWS
AFIG
Assignments/ translations are complete
No
Service Order distribution to various provisioning workgroups
Other Workgroups
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Hot cut is performed on DD
BellSouth requests hot cut confirmation from MCI
Is MCI satisfied with hot cut results?
Yes
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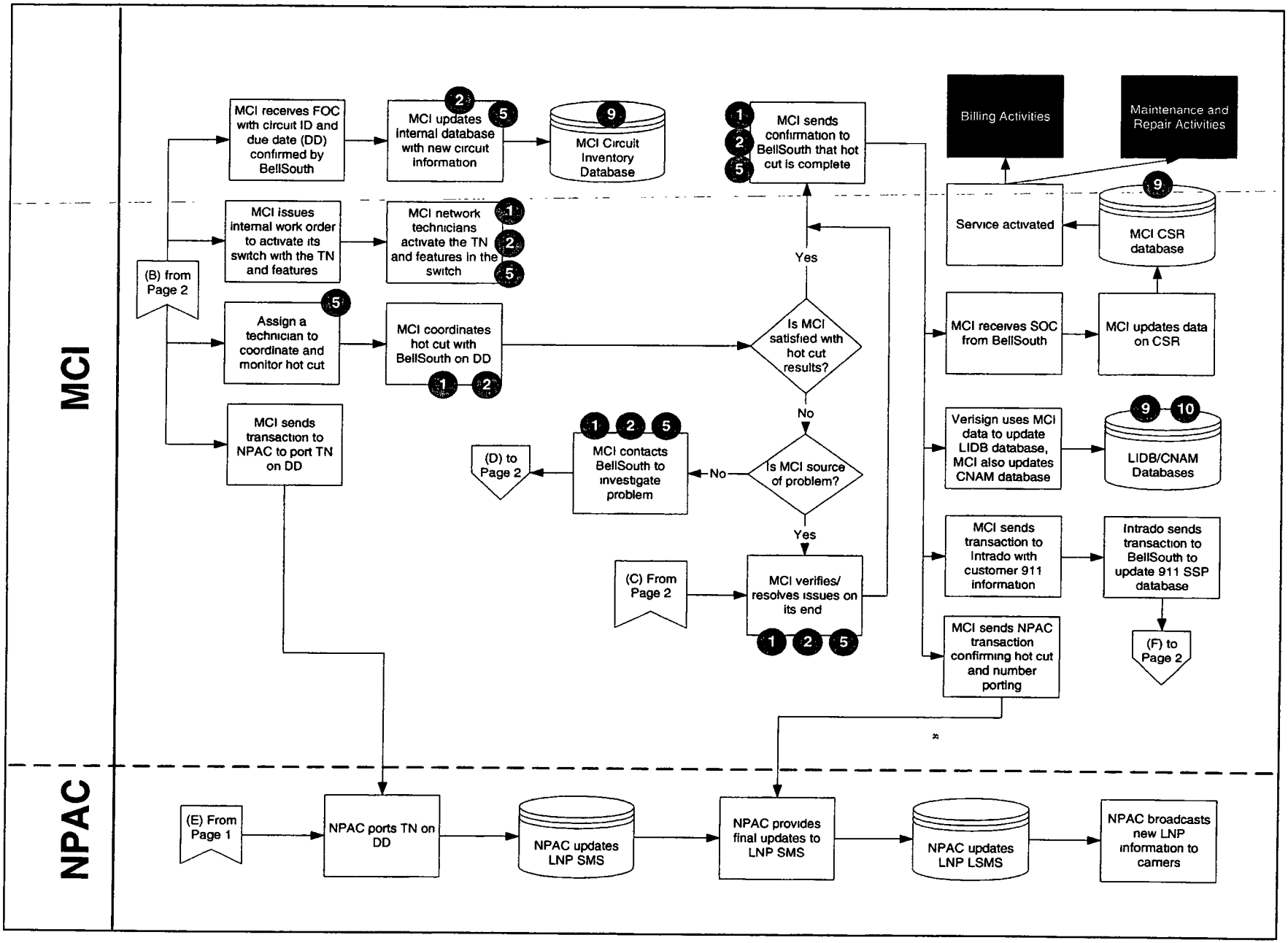
Directory Assistance Database
BellSouth sends SOC notice to MCI
End
MCI reports failed hot cut to BellSouth
(F) From Page 3
BellSouth updates 911 database for PSAP
BellSouth 911 database
(D) From Page 3
BellSouth resolves issue
Yes
Is BellSouth source of problem?
No
BellSouth contacts MCI to investigate the problem
(C) To Page 3)


MCI
NPAC
(B) from Page 2
MCI receives FOC with circuit ID and due date (DD) confirmed by BellSouth
MCI updates internal database with new circuit information
MCI Circuit Inventory Database
MCI issues internal work order to activate its switch with the TN and features
MCI network technicians activate the TN and features in the switch
Assign a technician to coordinate and monitor hot cut
MCI coordinates hot cut with BellSouth on DD
MCI sends transaction to NPAC to port TN on DD
MCI sends confirmation to BellSouth that hot cut is complete
Is MCI satisfied with hot cut results?
Yes
No
Is MCI source of problem?
No
MCI contacts BellSouth to investigate problem
(D) to Page 2
Yes
(C) From Page 2
MCI verifies/ resolves issues on its end
Billing Activities
Maintenance and Repair Activities
Service activated
MCI CSR database
MCI receives SOC from BellSouth
MCI updates data on CSR
Verisign uses MCI data to update LIDB database, MCI also updates CNAM database
LIDB/CNAM Databases
MCI sends transaction to Intrado with customer 911 information
Intrado sends transaction to BellSouth to update 911 SSP database
(F) to Page 2
MCI sends NPAC transaction confirming hot cut and number porting
(E) From Page 1
NPAC ports TN on DD
NPAC updates LNP SMS
NPAC provides final updates to LNP SMS
NPAC updates LNP LSMS
NPAC broadcasts new LNP information to carriers

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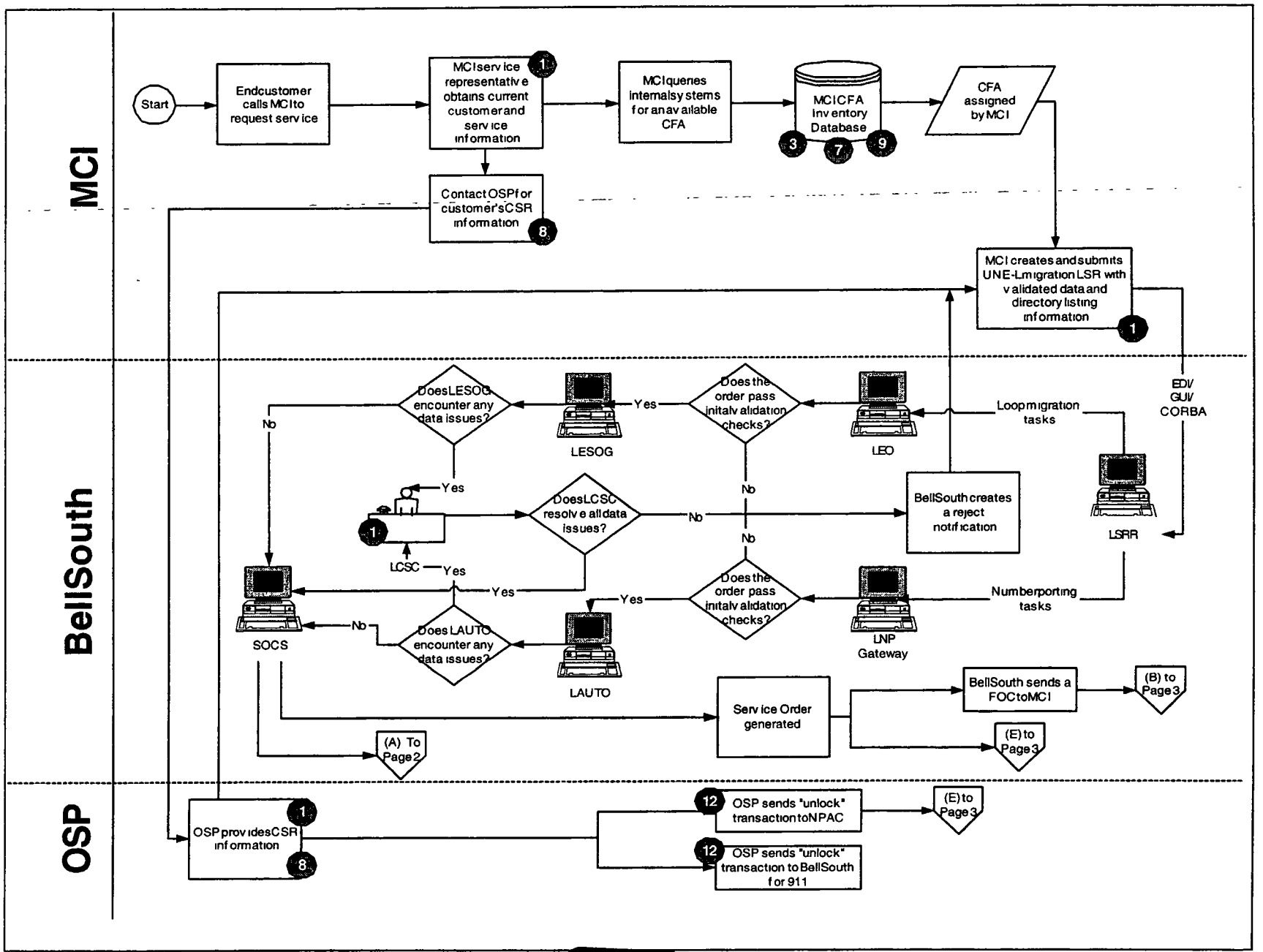
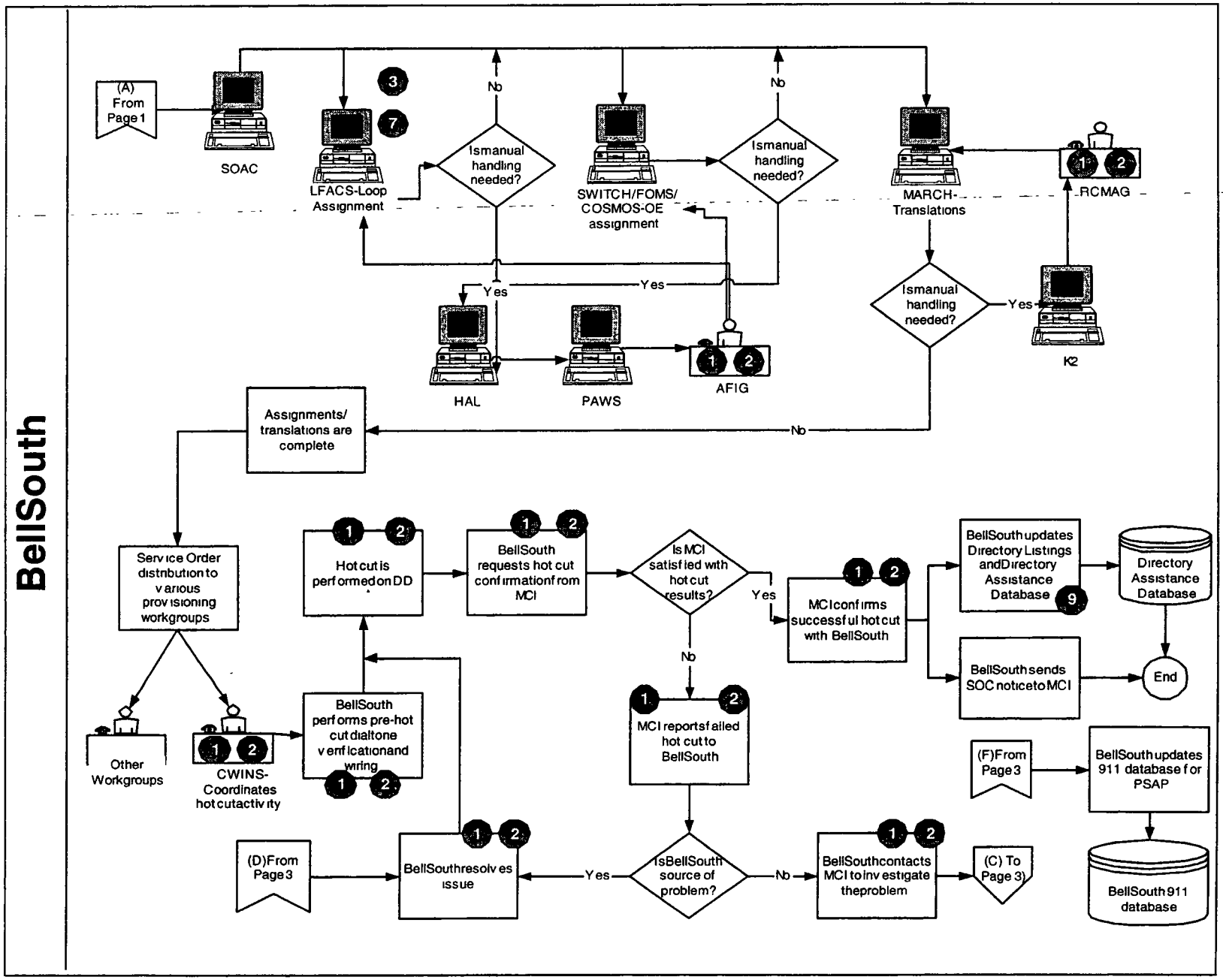
CLEC UNE-P to MCI UNE-L Migration (BellSouth)

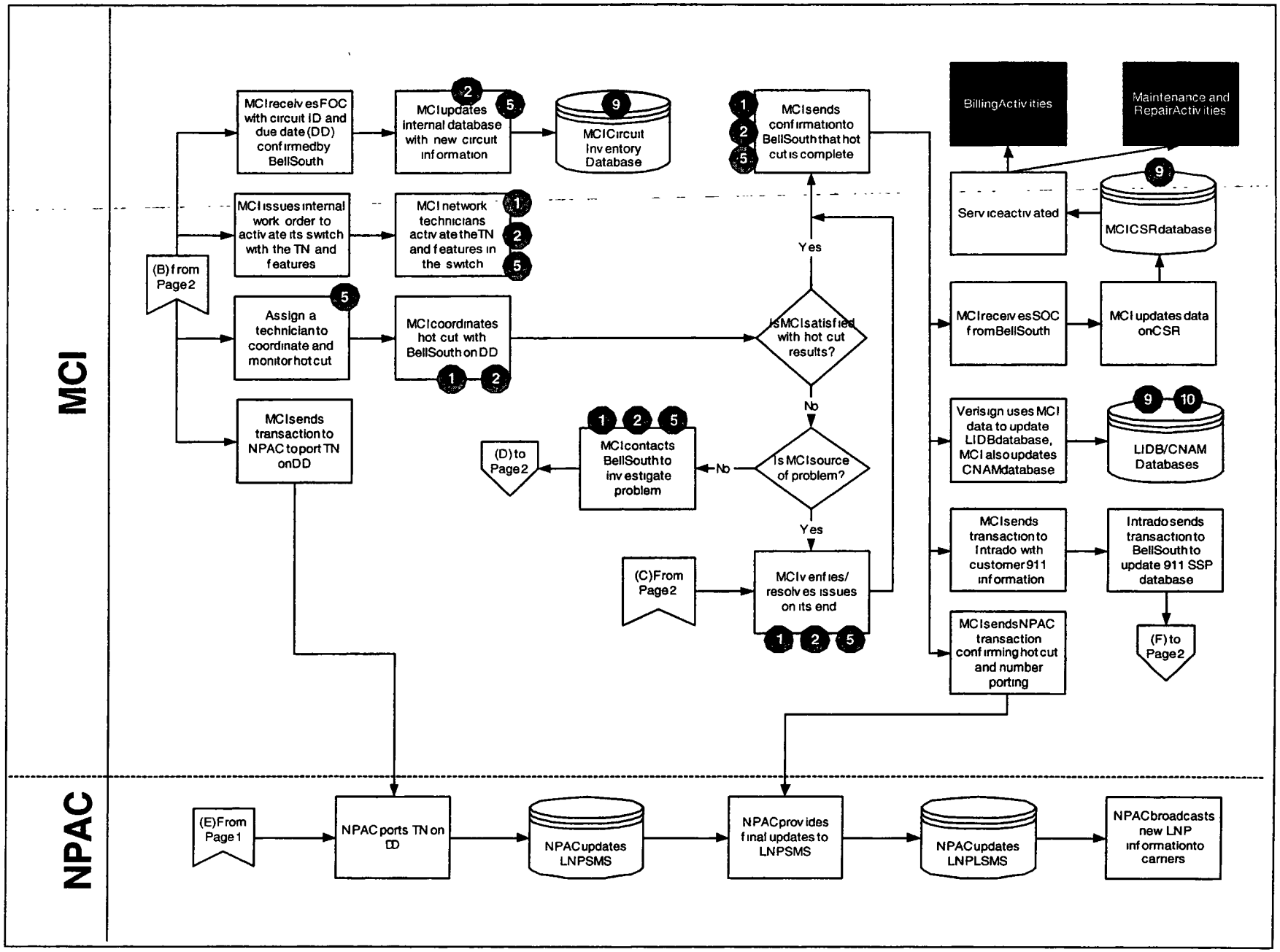


EXHIBIT

CLEC UNE-P to MCI UNE-L Migration (BellSouth)



CLEC UNE-P to MCI UNE-L Migration (BellSouth)



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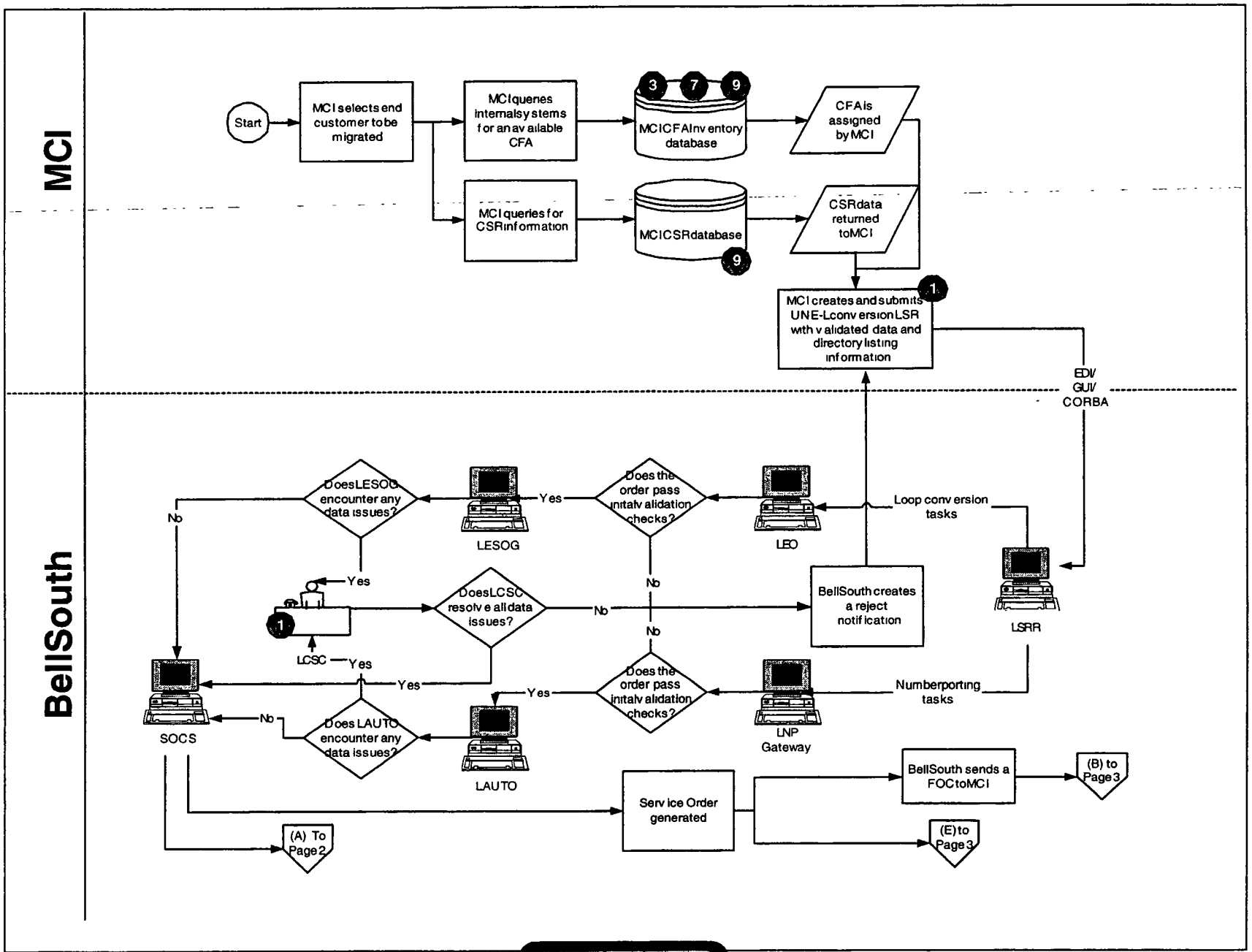
MCI UNE-P to MCI UNE-L Conversion (Individual Customer) (BellSouth)



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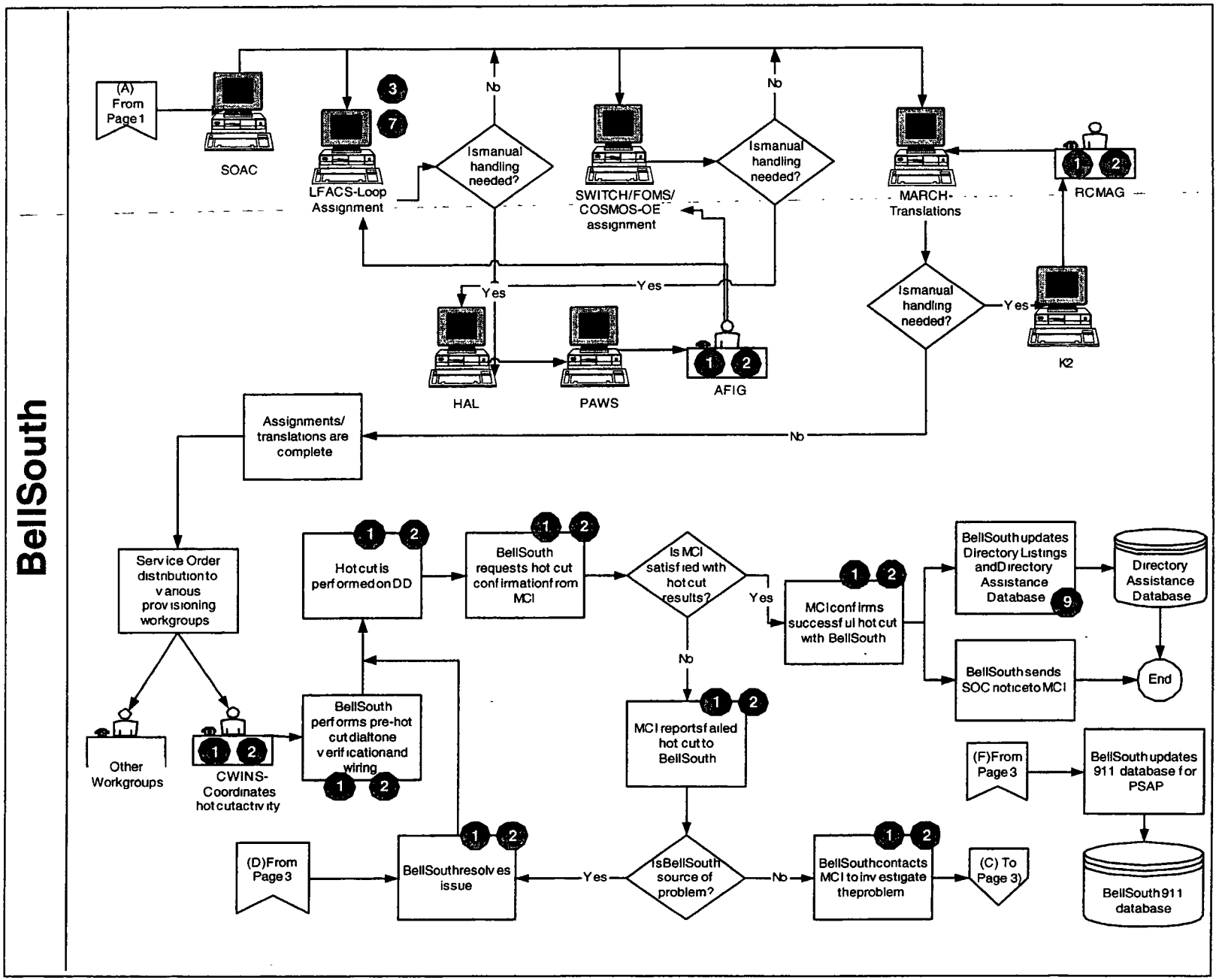
BellSouth
(A) From Page1
SOAC
LFACS-Loop Assignment
Ismanual handling needed?
No
SWITCH/FOMS/ COSMOS-OE assignment
Ismanual handling needed?
No
MARCH-Translations
RCMAG
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PAWS
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(F)From Page 3
BellSouth updates 911 database for PSAP
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No
BellSouth contacts MCI to investigate the problem
(C) To Page 3)
BellSouth 911 database

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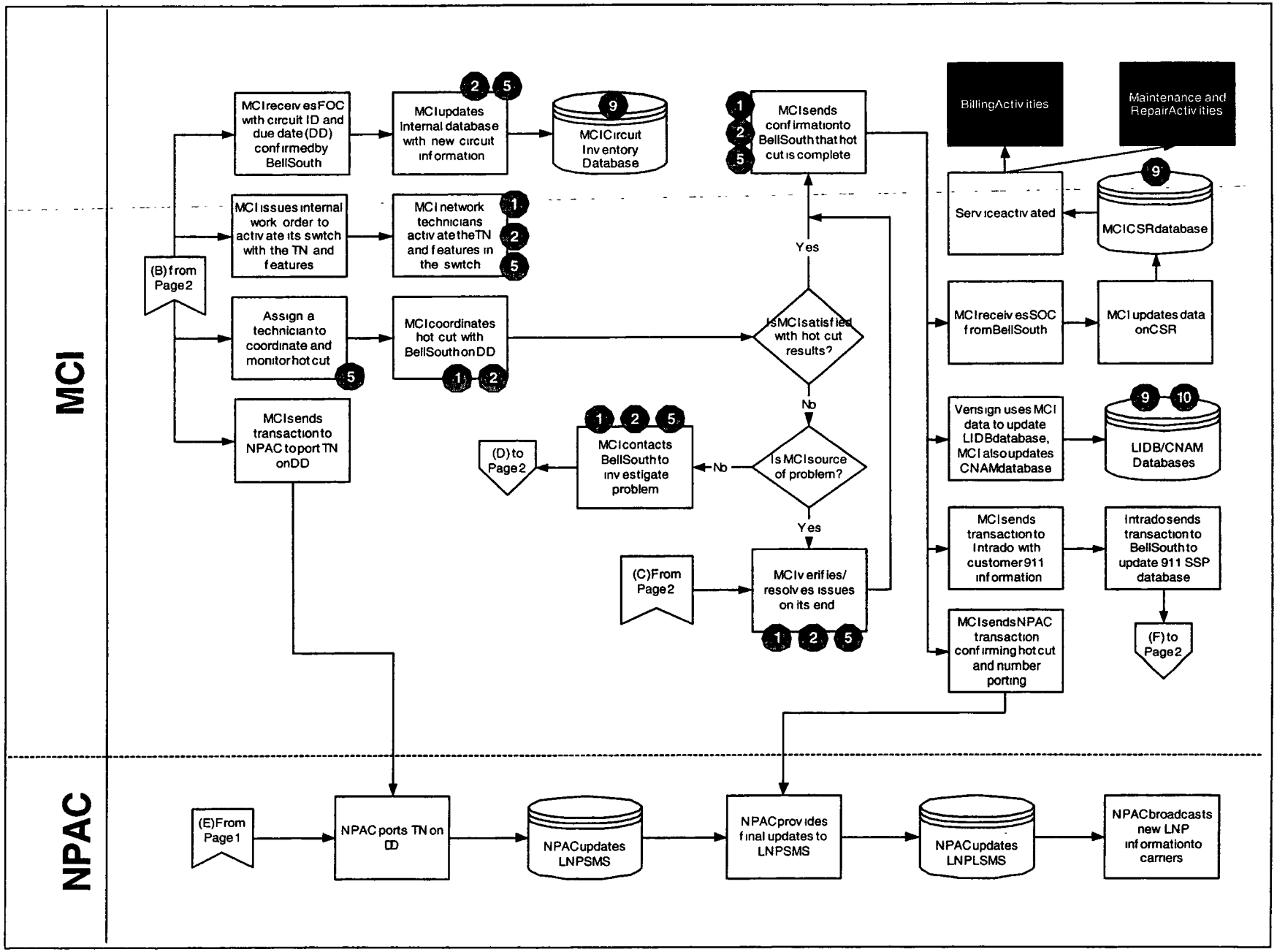

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GUI: Graphical User Interface
HAL/CRIS: Hands-off Assignment Logic/Customer Record Information System
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MARCH: Memory Administration Recent Change History
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OSP: Old Service Provider, also known as the "Losing CLEC"
PAWS· Provisioning Analyst Workstation System provisioning system
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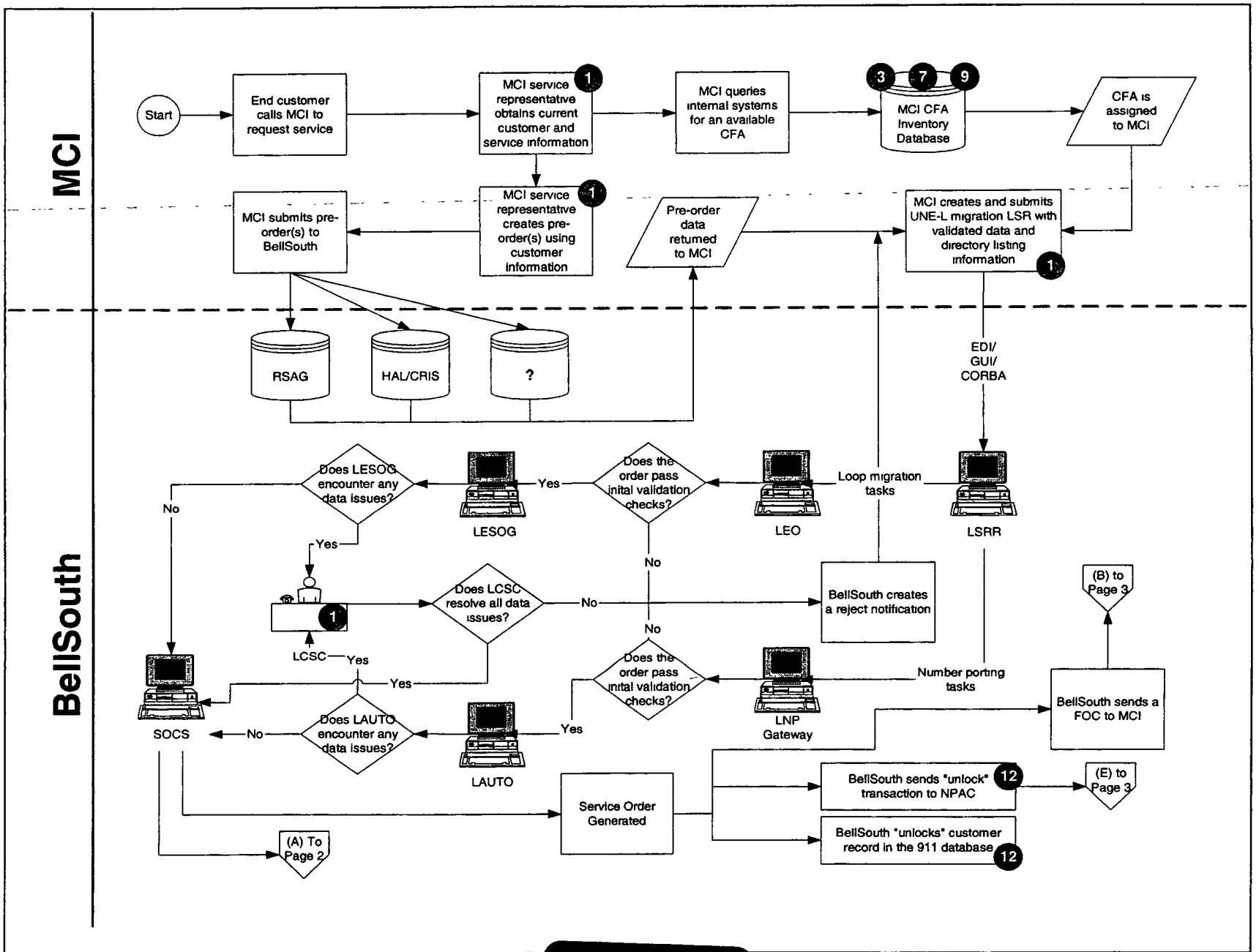
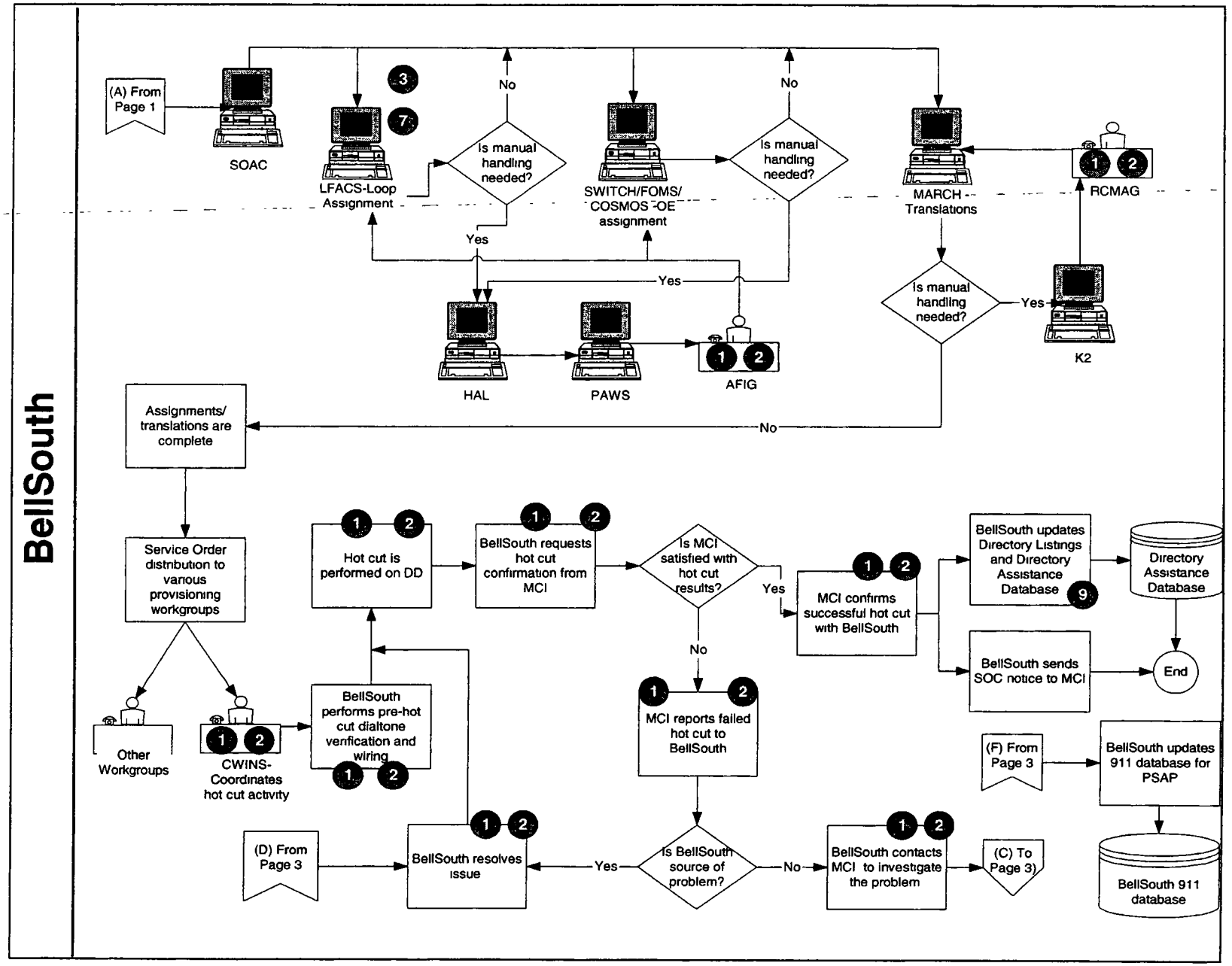
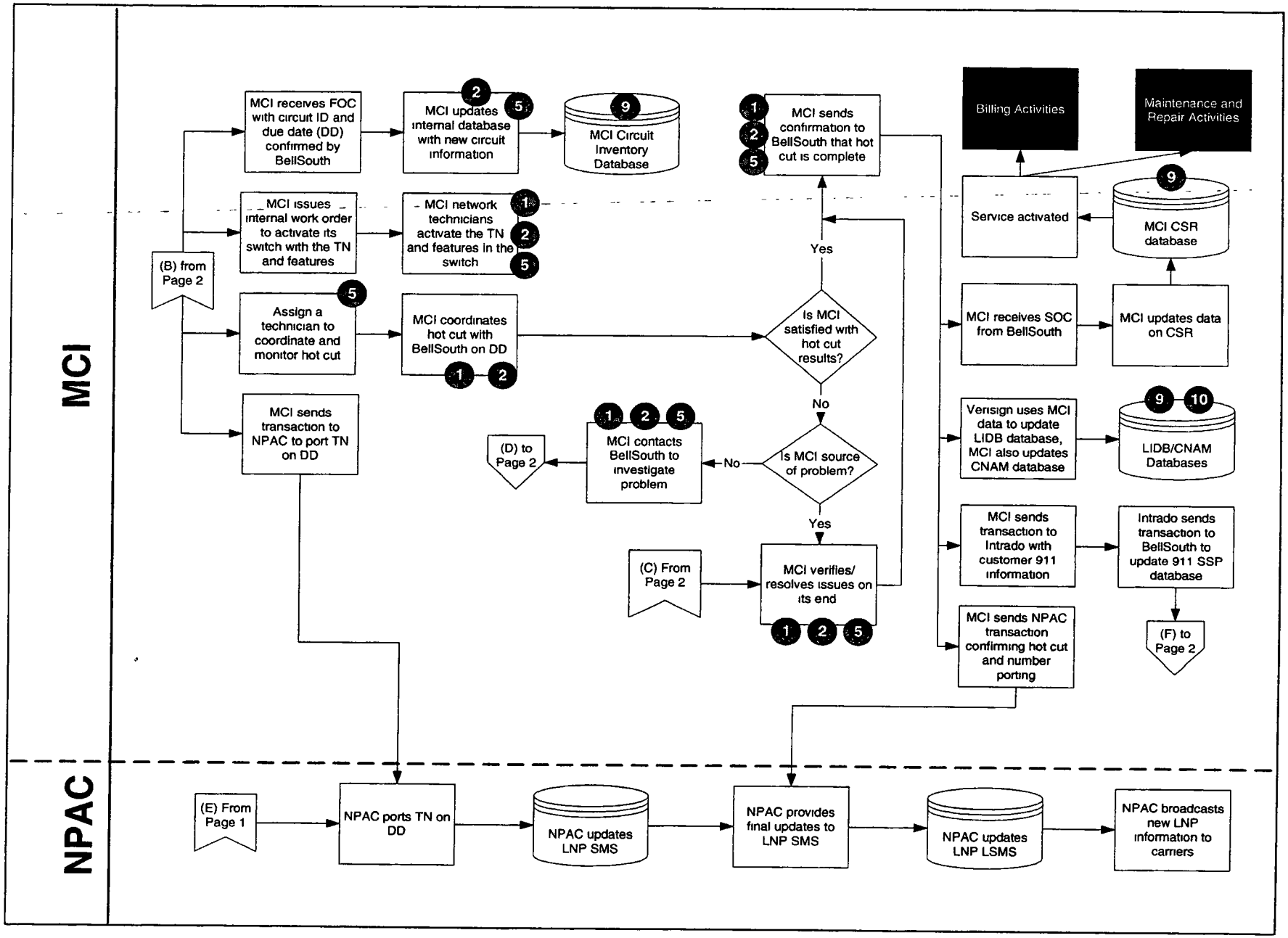
"Reverse" Hot Cut Hot cut performed when ILEC "wins back" customer from CLEC, and reinstates retail service
RSAG. Regional Street Address Guide
SMS: Service Management System: NPAC's system containing routing and LNP information
SOAC: Service Order Analysis and Control System
SOC: Service Order Confirmation
SOCS: Service Order Confirmation System
SSP. 911 Service Provider
SWITCH/FOMS· Frame Operations Management System
TAFI: Trouble Analysis Facilitation Interface
TAG/RoboTag: Telecommunications Access Gateway/Robust TAG


MCI
BellSouth
Start
End customer calls MCI to request service
MCI service representative obtains current customer and service information
MCI queries internal systems for an available CFA
MCI CFA Inventory Database
CFA is assigned to MCI
MCI submits pre-order(s) to BellSouth
MCI service representative creates pre-order(s) using customer information
Pre-order data returned to MCI
MCI creates and submits UNE-L migration LSR with validated data and directory listing information
RSAG
HAL/CRIS
?
EDI/ GUI/ CORBA
Does LESOG encounter any data issues?
LESOG
Yes
Does the order pass inital validation checks?
LEO
Loop migration tasks
LSRR
No
Yes
No
LCSC
Does LCSC resolve all data issues?
No
BellSouth creates a reject notification
(B) to Page 3
Yes
Yes
No
Does the order pass inital validation checks?
LNP Gateway
Number porting tasks
SOCS
No
Does LAUTO encounter any data issues?
LAUTO
Yes
BellSouth sends a FOC to MCI
Service Order Generated
BellSouth sends "unlock" transaction to NPAC
(E) to Page 3
BellSouth "unlocks" customer record in the 911 database
(A) To Page 2


BellSouth
(A) From Page 1
SOAC
LFACS-Loop Assignment
Is manual handling needed?
No
Yes
SWITCH/FOMS/ COSMOS -OE assignment
Is manual handling needed?
No
MARCH - Translations
RCMAG
Is manual handling needed?
Yes
K2
HAL
PAWS
AFIG
Assignments/ translations are complete
No
Service Order distribution to various provisioning workgroups
Other Workgroups
CWINS- Coordinates hot cut activity
BellSouth performs pre-hot cut dialtone verification and wiring
Hot cut is performed on DD
BellSouth requests hot cut confirmation from MCI
Is MCI satisfied with hot cut results?
Yes
No
MCI confirms successful hot cut with BellSouth
BellSouth updates Directory Listings and Directory Assistance Database
Directory Assistance Database
BellSouth sends SOC notice to MCI
End
MCI reports failed hot cut to BellSouth
(F) From Page 3
BellSouth updates 911 database for PSAP
BellSouth 911 database
(D) From Page 3
BellSouth resolves issue
Is BellSouth source of problem?
Yes
No
BellSouth contacts MCI to investigate the problem
(C) To Page 3)


MCI
NPAC
MCI receives FOC with circuit ID and due date (DD) confirmed by BellSouth
MCI updates internal database with new circuit information
MCI Circuit Inventory Database
MCI sends confirmation to BellSouth that hot cut is complete
Billing Activities
Maintenance and Repair Activities
(B) from Page 2
MCI issues internal work order to activate its switch with the TN and features
MCI network technicians activate the TN and features in the switch
Service activated
MCI CSR database
Assign a technician to coordinate and monitor hot cut
MCI coordinates hot cut with BellSouth on DD
Yes
Is MCI satisfied with hot cut results?
MCI receives SOC from BellSouth
MCI updates data on CSR
MCI sends transaction to NPAC to port TN on DD
No
Verisign uses MCI data to update LIDB database, MCI also updates CNAM database
LIDB/CNAM Databases
(D) to Page 2
MCI contacts BellSouth to investigate problem
No
Is MCI source of problem?
MCI sends transaction to Intrado with customer 911 information
Intrado sends transaction to BellSouth to update 911 SSP database
Yes
(C) From Page 2
MCI verifies/ resolves issues on its end
MCI sends NPAC transaction confirming hot cut and number porting
(F) to Page 2
(E) From Page 1
NPAC ports TN on DD
NPAC updates LNP SMS
NPAC provides final updates to LNP SMS
NPAC updates LNP LSMS
NPAC broadcasts new LNP information to carriers

Assumptions:

1) All customers migrating to MCI call into an MCI service center to order service
2) All customers port their numbers.
3) MCI switches will provide all MCI UNE-L customer features.
4) Customers are not moving to new locations
5) MCI uses a vendor, Intrado, to load 911 records to the PSAP.
6) MCI will maintain its own LIDB and CNAM databases. MCI uses a vendor, Verisign, to load LIDB data
7) Scenarios are represented as "ideal" (not necessarily zero-defect): Each party has sufficient resources; each party sufficiently manages its responsibilities; no "one-off" circumstances are involved.
8) When translations are performed, BellSouth sets the AIN trigger.
9) As part of MCI's agreement with BellSouth, line loss reports will only be generated for loss of lines to other carriers. If MCI is converting customers from one UNE type to another, line loss reports will not be generated.
10) Provisioning flows are based in part on information obtained from the KPMG Consulting BellSouth-Florida OSS Report.
11) Only processes and systems that directly impact MCI or BellSouth are outlined.
12) For migrations involving DSL, voice and data are pre-wired together in MCI's collocation (DSLAM and Splitter), and inventoried and assigned as one assembly with one CFA

Challenges:

(The following challenges are based on the UNE-L Operational Analysis: Activity Two reports.)

1) Challenges associated with manual handling throughout ordering and provisioning processes.
2) Challenges associated with high steady-state provisioning volumes and the impact on systems and processes.
3) Challenges associated with facility availability.
4) Challenges associated with facility re-use.
5) Challenges associated with expanded MCI Provisioning Group responsibilities for UNE-L service.
6) Challenges associated with ordering and provisioning when IDLC service is present.
7) Challenges associated with data management specifically related to facility assignment and inventory.
8) Challenges associated with insufficient CLEC-to-CLEC interfaces and processes.
9) Challenges associated with data integrity.
10) Challenges associated with MCI LIDB/CNAM data management responsibilities.
11) Challenges associated with batch migration of customers from UNE-P to UNE-L service.
12) Challenges associated with number unlocking procedures for 911 and LNP.

Glossary:

CAFE: Carrier Access Front End
CFA. Connecting Facility Assignment
CNAM: Customer Name Database
CORBA: Common Object Request Broker Architecture ordering interface
CPSS. Circuit Provisioning Status System
CPSS-TA: Circuit Provisioning Status System-Trouble Administration
CSOTS: CLEC Service Order Tracking System
DD: Due date
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