CenturyTel from implementing any such procedures unless they are identical to what is in the Socket agreement, notwithstanding the fact the CenturyTel's contract language provides that, with respect to Socket, the terms of its agreement will in all events prevail. Further, since ILECs must make all agreements available by adoption, the ILEC must also ensure that processes and procedures are internally consistent, consistent with industry standards, and consistently applied to all competitors. Socket would give any CLEC the unilateral right to dictate ILEC processes and procedures. CenturyTel's proposed contract language, to the contrary, preserves CenturyTel's ability to manage and operate its network with the flexibility it requires for valid business purposes and for compliance with its obligation to treat all competitors alike, all without conflicting in any way with the provisions that will be contained in the Socket agreement as to its relationship and operations with Socket. Giving a single CLEC the right to dictate ordering, provisioning and billing standards would foster administrative and operational chaos and would also eliminate any ability for an ILEC to meet its obligation to treat all competitors equally and manage its telecommunications business efficiently and effectively.

Q. AMONG OTHER THINGS, SOCKET APPEARS TO ASSUME THAT CENTURYTEL WILL CHANGE ITS PROCESSES AT ANY TIME IN A MANNER THAT WOULD BE HARMFUL OR, AT A MINIMUM, ADVERSELY IMPACT SOCKET'S PROCESS FOR DEALING WITH CENTURYTEL. IS THAT A VALID CONCERN?

A. No. CenturyTel understands that Socket should have advance notice of changes to CenturyTel's procedures and the ability to raise a valid dispute if a change materially affects Socket's service. As such, CenturyTel has provided for this notice and dispute process in its proposed language. In addition, of course, CenturyTel's language also

states that if there is any conflict between the agreement and the Service Guide, the agreement prevails.

Q. IS THAT A REASONABLE APPROACH TO SATISFYING SOCKET'S CONCERN?

A. Yes. Other than Socket's desire to improperly make CenturyTel conform to Socket-imposed processes, I do not believe that Socket can demonstrate any valid concern with CenturyTel's language.

Q. HOW SHOULD THE COMMISSION RULE ON THIS ISSUE?

A. The Commission should adopt CenturyTel's proposed language, which allows it to operate its telecommunications business while also addressing Socket's concerns regarding the applicable provisions contained in the parties' agreement. While Socket will suffer no harm with the adoption of CenturyTel's proposed language, adopting Socket's position would potentially wreak havoc on CenturyTel's abilities.

ISSUE 24- In the event one carrier is unable to provide meet-point billing data, should that carrier be held liable for the amount of unbillable charges?

Q. WHAT IS THE PARTIES' DISPUTE IN ISSUE 24?

A. The crux of this dispute concerns the overly broad, unlimited nature of Socket's proposed language holding a tandem provider financially responsible for otherwise unbillable charges. While CenturyTel may not disagree in principle with the philosophy of holding carriers accountable for providing meet-point billing data, Socket's proposed language to that effect is unreasonable and inappropriate.

Q. WHY IS SOCKET'S PROPOSED LANGUAGE IMPROPER?

A. Basically, Socket's proposed language is overly broad in its application, and fails to include any timeframes for the provision of the underlying data or any

exceptions/limitations on its applicability. Under Socket's proposed language, CenturyTel, for example, is at a much greater risk than Socket in those locations where CenturyTel is the tandem provider with the majority of the recording responsibilities. As such, although Socket's proposed language appears mutual and to impose reciprocal obligation, that is misleading. Further, Socket's text is insufficient in that it provides no timeframes for the provision of data. At what point, then, does the default billing mechanism trigger? In other words, Socket's language may permit imposition of this default billing if meet-point billing data is not immediately provided, is not provided within one hour or within any other time period Socket may unilaterally decide. Without any such provision addressing the timeframe in which the information must be provided before triggering the default billing mechanism, Socket's proposed language is operationally infeasible and unduly problematic. Moreover, Socket's proposal also ignores that valid reasons for delay may exist, including processing issues or system upgrades outside of the normal monthly process. But Socket's proposed language affords of no exception or limitation for good cause. The proposed language is overly broad, permits of no exceptions or good cause excuse, and is unduly onerous in the penalty. Socket's proposal is not indicative of industry practice and imposes undue risks and burdens on CenturyTel.

Q. SO IF LANGUAGE WAS CRAFTED THAT PROVIDED FOR ACTS OF GOD AND OTHER FORCE MAJEURE EVENTS AND PROVIDED SOME RELIEF FOR NOTIFICATION OF SYSTEM UPGRADES OR PROCESSING PROBLEMS THAT MIGHT CAUSE REASONABLE DELAY IN PROCESSING BUT NOT LOSE RECORDS, THEN THIS SHOULD BE REASONABLE AND IN ACCORDANCE WITH NORMAL INDUSTRY PRACTICE?

A. Yes.

Q. HOW SHOULD THIS ISSUE BE RESOLVED?

A. Because of the significant practical and operational problems associated with CenturyTel's proposed language, the Commission should reject that language.

ISSUE 26- Should each party be required to pass calling party number (CPN) information to the other party?

Q. WHAT IS CALLING PARTY NUMBER (CPN)?

A. As the name implies, Calling Party Number or CPN is the discrete 10-digit telephone number that is assigned to the end user location from which a call has been placed to the PSTN.

Q. IS IT IMPORTANT THAT CPN ACCOMPANY TRAFFIC?

A. Yes. Since CPN identifies the call origination location, CPN also identifies the carrier that provides service to the end user originating the call and also allow the call to be jurisdictionalized as local, intraLATA or interLATA and intrastate or interstate.

Q. SO CENTURYTEL AGREES THAT EACH PARTY SHOULD BE REQUIRED TO PASS CALL DETAIL INFORMATION FOR MEET POINT TRAFFIC?

A. Yes. As I previously mentioned, CenturyTel has been a leading advocate for requiring all carriers to pass complete and correct call information to help resolve the phantom traffic issue and properly jurisdictionalize traffic for intercarrier compensation purposes. In addition, I have already recognized the applicable law in Missouri, the Enhanced Record Exchange Rule.

Q. SO WHY IS THERE ANY DISPUTE BETWEEN SOCKET AND CENTURYTEL?

A. Good question. The parties seem to be in violent agreement. CenturyTel's primary concern with Socket's proposed language is in including transit traffic without any apparent limitation on the obligation to provide the specified call detail. Under the transit traffic scenario, only the call detail transmitted by a third party can be passed on to the terminating party by the transit provider. Nonetheless, Socket's language could be

interpreted as obligating CenturyTel to somehow obtain and pass complete call detail even if such detail is not sent to it from the originating party. Remember that the final agreement is adoptable by other competitors and other carriers may MFN into this agreement and attempt to prosecute CenturyTel for not complying with the terms as interpreted at face value.

Q. WHAT LANGUAGE HAS CENTURYTEL PROPOSED TO ADDRESS THIS ISSUE?

A. Consistent with industry standards and applicable law, as well as addressing the transit traffic concern outlined above, CenturyTel has proposed the following language:

> 16.2 Each Party will transmit call detail information to the other for each call being terminated on the other's network, including calls that transit to the other from third party carriers, in compliance with the provisions of the Missouri Enhanced Records Exchange Rule; 4 CSR 240, Chapter 29, except that the obligation regarding transiting traffic is limited only to the unaltered transmission of call detail information as provided by the call originator. For traffic that is not covered by that rule, each Party will include in the information transmitted to the other for each call being terminated on the other's network (where technically available to the transmitting party), the originating Calling Party Number (CPN). For all traffic originated on a Party's network including, without limitation, Switched Access Traffic, and wireless traffic, such Party shall provide CPN as defined in 47 C.F.R. § 64.1600(c) ("CPN"). Each Party to this Agreement will be responsible for passing on any CPN it receives from a third party for traffic delivered to the other Party. In addition, each Party agrees that it shall not strip, alter, modify, add, delete, change, or incorrectly assign any CPN. If either party identifies improper, incorrect, or fraudulent use of local exchange services (including, but not limited to PRI, ISDN and/or Smart Trunks), or identifies stripped, altered, modified, added, deleted, changed, and/or incorrectly assigned CPN, the Parties agree to cooperate with one another to investigate and take corrective action.

This proposed language addresses the overarching concern with passing CPN, is consistent with applicable law, and does not obligate the parties to pass call information in circumstances in which the originating carrier did not pass such information. Further, as far as I understand it, CenturyTel and Socket have also agreed to compliance with the

Enhanced Records Exchange Rule where it applies and CenturyTel agrees to Socket's text where the Enhanced Records Exchange Rule does not apply.

Q. SHOULD THE COMMISSION RULE ON THIS ISSUE?

A. Rejecting Socket's overly broad contract language that does not adequately address the parties' concerns, the Commission should adopt CenturyTel's proposed language set forth above.

ISSUE 29- Should Century Tel's proposed routing point limitations be included in the ICA

Q. WHAT IS A ROUTING POINT?

A. A Routing Point is an identified carrier destination that is used by the originating carrier to route calls to a specified NPA-NXX that belongs to the terminating carrier. A Routing Point is typically the terminating carrier's switch location but may be a carrier local POP where the actual switch is in a distant location. In addition, the Routing Point is used to calculate airline mileage for the distance-sensitive transport element charges of Switched Access Services

Q. WHAT IS THE HEART OF THE DISPUTE REGARDING ROUTING POINT DESIGNATION?

A. The parties' dispute primarily concerns what limitations, if any, are appropriate in designating routing points for intercarrier compensation purposes. Whereas Socket proposes broad language that provides no limit on its ability to designate routing points, CenturyTel proposes contract language designed to satisfy critical policy and operational concerns by geographically limiting where routing points may be designated.

Q. WHAT LANGUAGE DOES CENTURYTEL PROPOSE?

A. In an effort to permit Socket to reasonably designate routing points while maintaining certain necessary limitations on location, CenturyTel proposes the following language (Socket agrees to the first sentence):

16.6 Routing Points

Socket will also designate a Routing Point for each assigned NXX code. Socket may designate one location within each Rate Center as a Routing Point for the NPA/NXX associated with that Rate Center; alternatively, Socket may designate a single location within one Rate Center to serve as the Routing Point for all the NPA/NXXs associated with that Rate Center and with one or more other Rate Centers served by Socket within an existing CenturyTel Local Calling Area and LATA.

Q. WHY DOES SOCKET OPPOSE THIS LANGUAGE?

A. As best I can tell from the Joint DPL, the only basis for Socket's opposition is that CenturyTel's language limits Socket's options for designating routing points. But Socket never explains why it should be entitled to carte blanche decision-making as to the location of routing points and why any limitation at all is inappropriate. Moreover, Socket never takes issue with the specific limitation CenturyTel proposes; instead, Socket appears to oppose including any limitation whatsoever.

Q. WHY IS SOCKET'S LANGUAGE PROBLEMATIC?

A. With Socket's language, there is absolutely no limitation on where Socket may designate the routing point. Socket could, for example, designate a routing point at the North Pole if it so chooses. Were it to do so, Socket's proposed language sanctions such an absurd selection and does not afford CenturyTel an opportunity to dispute or otherwise challenge

Socket's selection. Nor would CenturyTel have any recourse for cost recovery purposes. If Socket's switch was actually located at the North Pole, then admittedly the North Pole would properly be the routing point. But where Socket's switch is not actually located at that point and where the routing point is artificially selected on an unreasonable basis, significant problems arise.

Q. WHAT DO YOU MEAN?

A. Consistent with my explanation of what a routing point is above, the parties have agreed in Article II that "[t]he Routing Point is used to calculate airline mileage for the distance-sensitive transport element charges of Switched Access Services." In other words, the cost of the facilities from the routing point to the Point of Interconnection. This definition could affect who pays for the facilities to the Routing Point if the Routing Point is designated as the POI. Socket's language would be less troublesome if it was revised to state that each party is responsible for providing facilities from their designated Routing Point to the POI. Additionally, the language regarding the POI should state that a POI must be established within the boundaries of CenturyTel's local exchange, typically the switch, when traffic exceeds the DS-1 threshold. If these terms are provided for in the agreement, then the routing point designation is no longer a problem.

Q. ARE YOU ALSO ADDRESSING THE POI ISSUE?

A. No, I am not. CenturyTel witness Cal Simshaw is providing testimony addressing the parties' disputes on the POI issue.

Q. HOW SHOULD THE COMMISSION RESOLVE THIS DISPUTE?

A. Because Socket's proposal is unduly problematic and may improperly shift substantial costs on CenturyTel that should otherwise reasonably be attributed to Socket, the Commission should reject Socket's proposed language. Instead, the Commission should

adopt CenturyTel's proposal, which merely provides reasonable geographic limitations on Socket's ability to designate routing points for intercarrier compensation purposes.

ISSUE 31- Should Socket's proposed language regarding the exchange of enhanced/information services traffic be included in the agreement?

Q. WHAT IS THE NATURE OF THE PARTIES' DISPUTE HERE?

A. Because the FCC has not yet determined the appropriate treatment of VOIP traffic for intercarrier compensation purposes and because Socket's proposed contract language is problematic, CenturyTel opposes Socket's proposed section 17.0, addressing so-called "enhanced/information services traffic."

Q. SHOULD THE PARTIES' INTERCONNECTION AGREEMENT INCLUDE SOCKET'S PROPOSED LANGUAGE REGARDING THE EXCHANGE OF ENHANCED/INFORMATION SERVICES TRAFFIC?

A. Absolutely not. The parties' interconnection agreement should not purport to define enhanced/information services traffic, should not provide intercarrier compensation treatment that may contravene federal law, and in any event should not include the language Socket proposes. First, unlike Socket, CenturyTel does not propose language addressing exchange and compensation of enhanced/information services traffic because 251/252 interconnection agreements are meant for the exchange of local telecommunications traffic. Socket's proposal would have non-local traffic exchanged over the same facilities as local traffic, giving rise to concerns about possible phantom traffic and access charge avoidance. Second, Socket's proposed language is also full of ambiguity. It is not at all clear, for example, what it means for carriers to "exchange" information or enhanced services traffic, nor is it clear what rate applies. Third, the proposed language expressly vests Socket with unilateral authority to decide the mechanism by which the so-called "Percent Enhanced Usage" factor would be

determined, impacting whatever compensation regime applies to exchanged traffic subject to the provision. Fourth, Socket's proposed language improperly exempts traffic from access charges that may otherwise apply. The very last sentence of its language, for example, specifically provides that the compensation regime Socket is unilaterally creating applies "regardless of the locations of the calling and called parties, and regardless of the originating and terminating NPA/NXXs." In other words, the provision creates substantial arbitrage opportunities allowing carriers to completely circumvent applicable access charges by creative re-characterization of traffic.

Finally, Socket's proposed contract language is improper because Socket is attempting to improperly anticipate or eliminate the terms of future regulation in its favor. The FCC has preempted the VOIP issue and is still deciding under what circumstances VOIP traffic is considered telecommunications and when it is subject to access charges vs. recip comp vs. some other treatment. This not an issue to be unilaterally decided by Socket. Because of pending FCC proceedings addressing this critical issue, it is premature to include VOIP terms in the parties' interconnection agreement. The parties should instead wait until the FCC issues its VOIP regulations and then, if required, incorporate them into the agreement as a change of law.

Q. HOW SHOULD THE COMMISSION RESOLVE ISSUE 31?

A. The Commission should reject Socket's proposed language, which would create serious, far-reaching problems and erect new arbitrage opportunities allowing carriers to, among other things, avoid otherwise applicable access charges. Socket's effort in that regard cannot succeed.

IV. Article XIII Disputed Issues

Q. WITH RESPECT TO THE PARTIES' DISPUTES IN ARTICLE XIII: OSS, ARE YOU ADDRESSING ALL ASPECTS OF ALL ISSUES THAT REMAIN IN DISPUTE BETWEEN THE PARTIES?

A. No, I am not. CenturyTel witnesses Maxine Moreau and Carla Wilkes are providing detailed testimony discussing the parties' specific disputes relating to Socket's OSS demands and explaining CenturyTel's proposals in that respect. While they speak to specific disputed issues, I am generally addressing the appropriateness of requiring CenturyTel to provide an electronic OSS similar to that provided by AT&T-Missouri, and the implementation of any OSS to be developed and deployed as a result of this proceeding.

Q. DO YOU HAVE ANY OSS-RELATED BACKGROUND THAT WOULD ALLOW YOU TO TESTIFY ABOUT THE PROVISION OF OSS TO SOCKET AND, MORE SPECIFICALLY, OSS IMPLEMENTATION?

A. Yes. As I mentioned before, I was employed by AT&T's predecessor company, Southwestern Bell Corporation from 1978 until 1995. In the early 1990s, SBC assigned me to be the company representative to the newly created industry forum for the development of electronic OSS for access by external carriers, including primarily IXCs at that time.

Q. WHAT WAS THIS FORUM AND WHEN WAS IT FORMED?

A. The name of the forum was the Electronic Communications Implementation Committee (ECIC). I believe that ECIC began its initial meetings sometime in 1992 and the forum became official and was officially named in the summer of 1993. Thereafter, the ECIC worked under the umbrella of the Alliance for Telecommunications Industry Solutions (ATIS), which is a U.S.-based organization committed to rapidly developing and promoting technical and operations standards for the communications and related information technologies industry worldwide.

Q. IS THE ECIC STILL A STANDING ATIS COMMITTEE?

A. Apparently not. In preparation for this testimony, I accessed the ATIS website. ECIC is no longer listed and is therefore apparently no longer an available resource to CenturyTel in developing and implementing OSS solutions. Among other things, the Commission should keep this in mind as it evaluates potential implementation requirements and timeframes.

Q. WHAT WAS THE PURPOSE OF THE ECIC?

A. The ECIC was created to negotiate industry consensus for the implementation of interfaces that would provide a level of interoperability between various telecommunications carriers' systems and to resolve implementation and operation issues that might subsequently arise. ECIC was instrumental in fostering the development of electronic OSS and in promoting its implementation among the major carriers.

Q. WHO PARTICIPATED ON THE ECIC?

A. The member companies were only the major regional or national carriers. These companies were the RBOCs, AT&T, MCI and the largest independents such as GTE and Sprint.

Q. DID CENTURYTEL OR ANY OTHER RURAL COMPANY PARTICIPATE?

A. No. Participation was only by the major carriers who possessed very sophisticated systems, available breadth of resources and the large order volumes to permit economies of scale and justification for the high costs involved in developing and implementing the electronic OSS under consideration.

Q. HOW WAS THE ECIC ORGANIZED?

A. The ECIC had nine subcommittees addressing various aspects of then-current and future electronic OSS implementations. The subcommittees were:

* Trouble Administration

* Primary Interexchange Carrier (PIC)/Customer Account Record Exchange (CARE)

* Security

* Connectivity

* Testing

* Data Reconciliation

* Change Management

* Steering Committee

* Electronic Access Ordering (EAO)

Q. WHAT WAS THE FUNCTION OF THE SUBCOMMITTEES?

A. The subcommittees were groups of subject matter experts whose job was to resolve the numerous issues that were identified or otherwise arose during the implementation of electronic OSS. The subcommittees were to arrive at industry wide consensus on the issues under their respective bailiwicks.

Q. ON WHICH SUBCOMMITTEE OR SUBCOMMITTEES DID YOU SERVE?

A. I was on the Steering Committee. At the time, I held a marketing job with SBC. In fact, I was the only marketing person in the ECIC- all other committee members were from their respective companies' technical systems departments.

Q. DID YOU PLAY AN ACTIVE ROLE IN THE DEVELOPMENT OF ELECTRONIC OSS SYSTEMS?

A. No, I did not have the necessary knowledge and expertise to provide technical guidance or advice on the specific standards and details involved with the electronic OSS solutions and issues under discussion.

Q. BUT YOU WERE A MEMBER OF THE IMPORTANT SUBCOMMITTEE THAT GUIDED THE OVERALL COMMITTEE'S EFFORT?

A. Yes, I was. In fact, the other committee members proposed me for the ECIC chair due to my ability to successfully negotiate consensus. SBC did not let me accept that position, however, since it would have required too much travel away from my regular duties.

A. Lack of Key Implementation Documents.

Q. DID ECIC PRODUCE DOCUMENTS AS THE SUBCOMMITTEES MET TO DISCUSS OSS ISSUES AND SOLUTIONS?

A. Yes.

Q. PLEASE DESCRIBE THE TYPE OF DOCUMENTS ECIC AND ITS SUBCOMMITTEES CREATED.

A. Certainly. The ultimate function of the ECIC was to produce technical "how to" documents that could be used to implement standardized electronic ordering, PIC/CARE and trouble reporting capabilities between carriers. Included in this documentation would be connectivity, security and testing standards and documentation on how to handle Data Reconciliation and Change Management.

Q. ARE ANY OF THOSE ECIC DOCUMENTS AVAILABLE TO CENTURYTEL?

A. Some documentation may be available for reference, but it does not appear that all critical documentation necessary to CenturyTel would be available to CenturyTel through ECIC. The ATIS website identifies a handful of archival documents for sale at prices ranging from $20 to $280 per document. I am not a systems expert, but it did not seem that the available documents covered all of the issues and requirements for implementing an electronic OSS.

Q. WHAT ISSUES AND REQUIREMENTS DID YOU NOTICE WERE MISSING FROM THE AVAILABLE DOCUMENTATION?

A. The documents that I did find included:

- Generic Interface Implementation Guidelines for Electronic Access Ordering (EAO),
- Interface model For Operations, Administration, Maintenance, and Provisioning (OAM&P),
- Interface requirements for the electronic exchange of PIC/CARE information,
- Technical specifications for the development, architecture, design, structure, and process flow of the Interactive Agent,
- A recommendation for the use of TCP/IP as a generic transport standard,
- The use of the TMN X-interface communicate information between telecommunication carriers,
- A recommendation for implementing security requirements between carrier Gateways, and
- The first in a series of interface requirements between OSS across jurisdictional boundaries.

Reviewing the above listings and considering the expected output from the subcommittees and CenturyTel's needs going forward, it appears that the following documentation may be missing-

- All documentation from the Data Reconciliation subcommittee,
- All documentation from the Change Management subcommittee,
- Implementation and testing documentation on trouble reporting,
- Implementation and testing documentation on PIC/CARE,
- Additional documentation on jurisdictional interface requirements,
- Additional documentation on connectivity, and
- Documentation on compartmentalizing data for security purposes.

Q. IS IT POSSIBLE THAT SUCH DOCUMENTATION DOES NOT EXIST?

A. Since I have not participated in the ECIC since 1995, I cannot speak with authority on what was actual produced since that time, only what the Steering Committee expected to be produced. Since some major national carriers do have electronic OSS systems in

place, however, logic tells me that the identified issues have been resolved and that documentation should exist.

Q. FOR CENTURYTEL TO DEVELOP AND IMPLEMENT ELECTRONIC OSS OF THE TYPE SOCKET DEMANDS IN THIS PROCEEDING, WHAT DOCUMENTS WOULD BE NECESSARY?

A. I am not a subject matter expert in OSS systems development so I cannot provide a complete and definitive list of required documents but at a minimum, I believe the starting point would be that CenturyTel would need to purchase the listed ATIS documents and also locate all of the industry-developed standards, implementation, testing and security documentation that appears to be missing from the ATIS website.

Q. ARE DOCUMENTS OF THAT TYPE AVAILABLE TO CENTURYTEL FROM ECIC OR ATIS?

A. It does not appear so.

Q. WHY DO YOU THINK THAT ALL NECESSARY DOCUMENTATION MAY NO LONGER BE AVAILABLE?

A. It appears that once the major participating carriers developed and implemented their solutions and had no further need for some of the original implementation documentation, similar to my old User Guides for the Microsoft DOS versions, they were no longer maintained or updated. There would obviously have been required ongoing OSS upgrades, of course, but that is 'business as usual" once the core system is deployed. All of the documentation likely exists somewhere, but it is not listed as available on the ATIS website and may not be available to CenturyTel to facilitate its development and implementation of new OSS of the sort Socket demands. Even if it is available, I am not sure that CenturyTel would be able to use the documentation to successfully implement electronic OSS.

Q. WHY DO YOU SAY THAT?

A. Remember that the ECIC members were all major national carriers who had the financial resources and demand volumes to justify very sophisticated OSS systems. Even without the electronic capabilities, the systems that I remember being used at SBC were far more sophisticated than CenturyTel's current systems. If the ECIC documentation only pertains to the implementation of electronic capabilities in sophisticated systems, then it will be less useful to CenturyTel since CenturyTel does not have the financial resources or the demand volumes to justify complete systems replacement to achieve parity with the RBOCs.

B. OSS Implementation Requires Industry Consistency.

Q. WHEN A COMPANY DEVELOPS AND IMPLEMENTS OSS, SHOULD IT DO SO ON A CARRIER-BY-CARRIER OR INDUSTRY WIDE BASIS?

A. Based on my ECIC experience, I would say OSS development and implementation should be industry-based rather than ad hoc based on specific carriers' unique demands. Indeed, ECIC addressed issues that convince me that ad hoc development would be inappropriate and problematic.

Q. CAN YOU TELL US A LITTLE ABOUT SOME OF THE ISSUES ECIC FACED THAT NEEDED RESOLUTION?

A. Yes, I can. The first hurdle was standards interpretation. Numerous interpretation issues arise when attempting to implement standards applying to multiple carriers in the industry. Many of these issues may not be discovered until after implementation is well underway. For this reason, the industry recognized the need to establish a forum to discuss, clarify and resolve the different interpretations of standards as well as to provide additional guidance to the industry when appropriate. The ECIC was formed to address and resolve such ambiguities.

Q. CAN YOU GIVE US AN EXAMPLE OF A STANDARDS INTERPRETATION ISSUE?

A. Yes. One example of a standards interpretation issue that ECIC wrestled with was the implementation of ANSI T1.227/228 for an electronic trouble administration application. Areas existed within the standards where the language could be interpreted differently by users based on their business practices, legacy OSSs, and gateway processing functionality. The ECIC found that not all corporate business practices could be incorporated in a generic object model intended for use across the whole industry. Ad hoc subcommittees were sometimes created within ECIC for the express purpose of interpreting ambiguous standards and reaching agreement on common functionality.

Q. WERE THERE ANY OTHER MAJOR ISSUES THAT ECIC ADDRESSED?

A. Yes. The security of customer and carrier data, specifically access control and authentication, was another area that required agreement between the implementing companies and additions to the standard to provide the needed functionality. The issues that ECIC had to address included the form of encryption to be used and the method of transmission for encrypted data between companies. These issues could be defined by establishing one or more standards but they could not be implemented on a practical basis without agreement on specifics, such as optional procedures or elements between the companies.

Other major issues included error handling and fault recovery. Defining a common set of error-handling procedures, for example, that could cover all expected protocol errors and that was acceptable to all companies was a major challenge within the ECIC.

The situation for fault recovery was even more challenging. No appropriate methodology existed that would allow the exchange of information over the standard interface with respect to anticipated outages and restoration of the various trouble administration subsystems. Fault recovery also involved data synchronization issues. It was imperative that system or connectivity failures ultimately resulted in synchronized data values upon restoration.

Q. THESE SOUND LIKE VERY COMPLICATED ISSUES. HOW DID THE ECIC ENSURE THAT THE ISSUES WERE RESOLVED OPERATIONALLY?

A. At the time I left the forum in mid-1995, I know that one of the means by which ECIC attempted to resolve these matters operationally was a uniform testing methodology to ensure interoperability across jurisdictions of different companies. The member companies possessed different policies, procedures, development methodologies and business strategies. We believed that many testing issues could not even be clearly identified until implementation was in progress. This unfortunately resulted in expenditure of even more time, money, and resources.

Q. HOW DOES YOUR KNOWLEDGE OF THE ECIC WORK PERTAIN TO CENTURYTEL'S OSS SITUATION?

A. The ECIC found that existing legacy systems limit the flexibility of a company to implement electronic OSS for an application without major modifications to systems and to existing methods and procedures. User training and user interaction with the systems also need to fit within the national OSS standards framework. Without the ECIC work, each pair of "intercommunicating" companies would have had to hammer out an agreement on how to actually implement the standards. This would have led to an extremely complicated maze of company-specific interfaces, each differing in greater or lesser degree from the others.

Q. SO FOR ANY POTENTIAL OSS TO BE TRULY USEFUL, CENTURYTEL WOULD NEED TO ENSURE THAT ITS OSS CONFORMS TO ECIC STANDARDS, WHATEVER THOSE MAY BE, AND NOT JUST THE CAPABILITIES REQUESTED BY SOCKET?

A. That is correct.

Q. SHOULD CENTURYTEL DEVELOP AND IMPLEMENT AN ELECTRONIC OSS DESIGNED SOLELY TO MEET SOCKET'S DEMANDS WITHOUT BEING CONSISTENT WITH BROADER INDUSTRY STANDARDS, PROCEDURES, AND OBJECTIVES?

A. No. Doing so, if possible, would increase overall costs in the long run, likely lead to errors or problems on implementation, and exacerbate potential problems upon interface with other carriers.

Q. BUT CENTURYTEL WOULD BE ABLE TO OBTAIN THE INDUSTRY STANDARDS FOR USE IN SUCH AN EFFORT?

A. Presumably yes but that is not the major issue. As I previously testified, the carriers participating in ECIC had very sophisticated systems, available breadth of resources and the large order volumes to permit economies of scale and to justify the high costs of development and implementation. Further, even those carriers had the legacy system problems that I noted in my previous testimony. Even with the standards available to it, CenturyTel would not find implementing an electronic OSS system an easy process; especially since the existing CenturyTel systems are not as sophisticated as the pre-automation RBOC systems.

Q. HOW LONG DID IT TAKE THE ECIC CARRIERS TO IMPLEMENT AN ELECTRONIC OSS?

A. I cannot speak to the specific timeframe for implementation, but I can state that the work began in 1992 and that to my knowledge no ECIC-participating carrier had electronic OSS developed by the time I left in mid-1995.

Q. SO, AT A MINIMUM, IT TOOK SEVERAL YEARS FOR EVEN THE LARGEST OF CARRIERS TO UPGRADE OR CONVERT THEIR LEGACY SYSTEMS TO ELECTRONIC OSS?

A. Yes, I believe that to be so.

Q. AND THESE CARRIERS BEGAN WORKING ON AND IMPLEMENTING OSS WELL BEFORE THE FCC'S 1997 IMPLEMENTATION OF THE 1996 FTA?

A. Yes.

Q. IF CARRIERS BEGAN IMPLEMENTING OSS PRIOR TO THE FTA, WOULD CLECS HAVE HAD TO BEAR ANY OF THE DEVELOPMENT AND IMPLEMENTATION COSTS IN THE FORM OF NON-RECURRING CHARGES FOR ORDERS PLACED VIA THE ELECTRONIC OSS?

A. Very little compared to the total cost in my estimation. The bulk of the OSS work would have been done and paid for by the RBOCs and major IXCs who were exchanging large volumes of orders with each other at that time. I believe that enhancing existing OSS to accommodate CLEC use would have been relatively less costly. I would believe that current CLEC NRCs are primarily based upon ongoing administrative and maintenance costs vs. development and implementation,

Q. BUT IF OSS WERE DEVELOPED AND IMPLEMENTED TODAY, WOULD ALL USERS, INCLUDING CLECS, NEED TO BEAR THE COSTS FOR A SYSTEM DESIGNED FOR THEIR USE?

A. Yes, ILEC cost recovery for work performed on the behalf of CLECs, including developing and implementing OSS, is a component of Federal regulation.

Q. COULD CENTURYTEL IMPLEMENT ELECTRONIC OSS AS DEMANDED BY SOCKET WITHIN 90 DAYS?

A. Absolutely not. Given the time it took for the RBOCs to implement electronic OSS, I don't see any way CenturyTel could implement what Socket is demanding in less that 24-36 months and at a cost in excess of $16M.

V. CenturyTel is Not AT&T

Q. WHY ARE YOU INCLUDING A SEPARATE SECTION OF TESTIMONY EXPLAINING THE OBVIOUS, THAT CENTURYTEL IS NOT AT&T?

A. Based on the large number of Socket contract language proposals that are primarily based on provisions in the AT&T successor ICA to the M2A, as well as Socket's repeated argument that its proposals are based on Commission precedent (*i.e.*, the M2A successor proceeding), it appears necessary to note that CenturyTel is a different company, operating in different areas with a different network and different operations. It is fundamentally inappropriate to simply extend AT&T-oriented obligations to CenturyTel without any showing that those specific obligations are equally applicable to CenturyTel—which Socket never does. In addition to my testimony, Dr. Avera similarly speaks to this fundamental distinction and addresses certain regulatory and economic principles that dictate treating CenturyTel differently from AT&T.

Q. IN WHAT WAYS IS CENTURYTEL DIFFERENT FROM AT&T?

A. Generally, among other things, CenturyTel differs from AT&T in size of the customer base, geographic density of the customer base, size of the employee base, finances, economy of scale, economy of scope, order volumes, systems deployed, level of automation, business strategies and policies, and actual processes and procedures.

Let me provide some examples of the disparity between the two companies. All individual legal entity CenturyTel subsidiary telephone companies combined have approximately 2.3 million access lines. In its 2005 year end report, AT&T states that it has 49 and a half million access lines. AT&T's subscriber base is therefore over 20 times greater than that of CenturyTel.

According to the US Census Bureau, there are at least eight urban areas in AT&T territory that individually have a greater population than the customer base of the

CenturyTel subsidiary companies' territories in all states combined. The largest of the AT&T urban areas by itself actually has five times the population of the total CenturyTel customer base.

To understand how population density affects the size and density of the AT&T and CenturyTel networks, visualize the St. Louis metropolitan area. Now take the population of metro St. Louis- which approximates the combined Century access line base- and spread it out across a territory greater than the states of Missouri, Illinois and Iowa combined. Now take the square mile territory of Missouri, Illinois and Iowa, break it up into county and multi-county sized chunks and spread those out across almost half the states in the continental United States. Now build one network for St. Louis and a different network to serve those lightly populated and widely separated chunks of land that are scattered across the country. Comparing those two networks provides an idea how CenturyTel compares to the smallest of AT&T's eight largest market areas.

Finally, a telling point that must be considered when evaluating the terms of an AT&T agreement is the business model that AT&T pursues and how that is diametrically opposed to CenturyTel's business model. Where CenturyTel does not own any wireless operations, AT&T owns the largest wireless business in the country. In its Yahoo subsidiary, AT&T also owns one of the largest national Internet operations. AT&T is also aggressively pursuing the cable business. Internet and cable operations are natural lead-ins to the provision of VoIP services.

Published comments by AT&T management and positions taken in AT&T regulatory filings all show that AT&T considers its landline telephone business to be a diminishing source of revenue with its primary business growth objectives focused in its

wireless, VoIP, Internet and cable operations. CenturyTel, on the other hand, considers its telephone operations to be its primary business and any affiliated lines of business are used in a supporting role.

With a fundamentally different business model critically focusing on different business plans, AT&T may be willing to accept terms that are less desirable to its traditional wireline telephone business if it can use those same terms to further its more important business objectives. The Commission, therefore, should look with a great deal of skepticism on AT&T agreement terms that are not a valid model to use for deciding agreement terms with independent telephone companies like CenturyTel.

Q. WHAT SHOULD THE COMMISSION DO WITH THIS INFORMATION?

A. As it approaches the disputed issues in this proceeding, the Commission should critically scrutinize Socket's AT&T-based proposals and reliance on the M2A successor proceeding as precedent, exercising due skepticism as to the applicability of those obligations to CenturyTel. While some AT&T obligations may appropriately apply to CenturyTel (e.g., general parity obligation, duty to provide certain UNEs), many will not (e.g., AT&T's OSS and Performance Measurements obligations, AT&T's underlying costs and TELRIC rates, etc.). The Commission should keep this in mind as it evaluates the parties' arguments.

VI. Article XII Disputed Issue – Number Portability

ISSUE NO. 2: Should the ica clearly specify that the parties are required to permit telephone numbers associated with remote call forwarding to be ported only when the number being forwarded is located in the same rate center?

Q. WHAT ISSUE(S) ARE IN DISPUTE BETWEEN THE PARTIES IN ARTICLE XII?

A. There is only one issue of dispute between the Parties in Article XII. That issue, Issue No. 2, relates to the number portability of Remote Call Forwarded telephone numbers.

Q. WHAT IS NUMBER PORTABILITY?

A. Number portability is the ability of users of telecommunications services to retain, at the same location, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another. In other words, when an end user switches from Socket to CenturyTel, that end user can retain its existing number and related local calling scope.

Q. WHAT IS REMOTE CALL FORWARDING?

A. With Remote Call Forwarding, the end user has no actual telephone or telephone equipment associated with the telephone number assigned to the end user. Rather, any call to the number terminates in the CenturyTel switch to which the number is assigned and then CenturyTel automatically forwards the call to the telephone number associated with a distant end user location specified by the customer. Like FX or VNXX, RCF is typically used by businesses that want to provide a local number for consumers to call without actually having a physical presence in the local area. With RCF, the customer pays for the local service, the RCF feature and for any applicable toll on all calls to the RCF'd number.

Q. WHAT IS THE BASIS OF THE PARTIES' DISPUTE IN ISSUE NO. 2?

A. Socket demands that CenturyTel port Remote Call Forwarded (RCF'd) numbers upon request. RCF customers are not usually local customers but rather customers whose physical location is somewhere outside of the local serving area and could be anywhere in the country. In effect, Socket demands that CenturyTel provide location portability– the porting of an existing number to a location outside the local serving area. Socket

further has stated that there is no technical reason why this cannot be done and also incorrectly states that there is no legal or policy reason why it should not be required.

Socket's demands are unreasonable; current local number portability regulations must be followed, which means the porting customer must remain at the same location and that location must be within the same local calling area.

Q. WHAT REQUIREMENT DOES CENTURYTEL PROPOSE TO INCORPORATE INTO THE ICA AS IT RELATES TO RCF.

A. CenturyTel offers to port RCF'd numbers so long as the number is forwarded to another number located in the same rate center—e.g., another local number or within the same "serving location." CenturyTel's proposed language in Article XII, Sec. 6.2.3 is as follows:

> Each Party shall permit telephone numbers associated with Remote Call Forwarding to be ported if the number if being forwarded to another number located in the same rate center.

Q. IS CENTURYTEL'S POSITION CONSISTENT WITH APPLICABLE LAW AND WITH PRONOUNCEMENTS BY THE FCC?

A. Yes, it is. I assume Socket will point out CenturyTel's duty under 47 U.S.C. § 251(b) (2) "to provide, to the extent technically feasible, number portability in accordance with requirements prescribed by the Commission." However, that duty has been specifically clarified by the FCC. As an initial matter, the current number portability obligation specifically excludes attempts to change the serving location of the customer or to port numbers outside of the current local calling area. Contrary to Socket's assumption in its proposed language, the service must continue *at the same location and that location must be in the same local calling area.* In the FCC's 4th Report and Order, for example, the FCC concluded that existing landline customers may port their numbers to wireless

carriers that serve the same physical location provided that the ported numbers remain rated to the original local calling area.

Local number portability is not designed to allow consumers, including business consumers, to move a number geographically or to move to a different physical location and keep the same local telephone number. In Section 153(30) of the FTA, the definition of "number portability" clearly specifies that number portability applies to "the ability of users of telecommunications services to retain, *at the same location*, existing telecommunications numbers without impairment of quality, reliability, or convenience when switching from one telecommunications carrier to another" (emphasis added).

Under Socket's proposal here, the RCF'd number would appear local, but it is not. The RCF'd number is a number in CenturyTel's switch and all calls to that number are being forwarded, typically via toll, to the actual customer location that is not located in CenturyTel's service area. As I previously stated, the ability of a consumer to keep a local number when moving to a new location or when moved out of the local calling area is called "location portability." To that end, the FCC stated in paragraph 182 of its First Report and Order that "[it] believe[s] ... that requiring service or location portability now would not be in the public interest" and that "the disadvantages of mandating location portability outweigh the benefits." In paragraph 181 of that same Order, the FCC further stated: "We decline at this time to require LECs to provide either service or location portability. ...The 1996 Act's requirement to provide number portability is limited to situations when users remain 'at the same location,' and 'switch from one telecommunications carrier to another,' and thus does not include service and location

portability." Thus, Socket's attempt to require CenturyTel to provide location portability via porting RCF'd numbers is inconsistent with the requirements of the FTA.

In summary, CenturyTel's position on this issue is consistent with federal law and FCC prouncements, while Socket's position is not.

Q. COULDN'T SOCKET ARGUE THAT THE CUSTOMER IS NOT CHANGING LOCATION BECAUSE CENTURYTEL IS RCF'ING THE NUMBER TO THE SAME PHYSICAL LOCATION THAT SOCKET WILL BE PROVIDING SERVICE?

A. That is a very misleading way to characterize the issue. As I stated above, with RCF, the actual location of the number for call termination is the CenturyTel switch, not any physical address where the customer is located. So, to be consistent with the FCC's requirements, CenturyTel should only port the number if it remains at the CenturyTel switch after the port. It is not technically feasible for Socket to port a number and have it remain at the CenturyTel switch.

Q. CAN YOU EXPLAIN WHY IT IS NOT TECHNICALLY FEASIBLE?

A. All numbers reside in the translations within local switches. Any specific number resides in the switch that is owned by the carrier that actually provides service to the end user. With normal local service, not RCF'd service, the switch routes all calls via the local network to the end user location associated with the number. When a number is ported, it is removed from the translations of original switch and installed in the translations of the switch that is owned by the porting carrier. The originating carrier then routes calls to the porting carrier's switch after dipping a database for the Location Routing Number assigned to the ported number by the porting carrier. As I previously testified, the legal end user physical location for a RCF'd number is the original switch. Therefore, in order to comply with current regulation, a ported RCF'd number would actually be routed right

back to the original switch for termination, Since the number has been removed from the translations in the original switch, completing calls to the original switch is not technically possible.

Q. IF SOCKET'S PROPOSED LANGUAGE IS ACCEPTED, WILL IT PLACE AN UNREASONABLE BURDEN ON CENTURYTEL?

A. Yes. Under Socket's proposal, CenturyTel would be required to incur the additional and unrecoverable cost of transporting local calls to the ported number to the RCF customer's location outside the call area served by CenturyTel's switch. The porting of these numbers to a customer physically located in another rate center would improperly shift the burden of additional costs to CenturyTel. Under Socket's proposal, local end users would call what they believe is a local number, and CenturyTel would be expected to carry that call as if it were local, ignoring the additional transport costs associated with out-of-area call termination. If the ported customer happens to be an ISP—and it is my understanding that many of Socket's customers are ISPs—then the transportation costs to CenturyTel would be excessive. As I previously testified, CenturyTel did an estimate of transporting a CLEC's ISP-bound traffic to a single point of connection per LATA in another state. For that one ISP CLEC, the estimate was almost a half million dollar per year per LATA in transiting charges.

Q. HOW WOULD YOU RESPOND TO SOCKET'S ALLEGATION THAT OTHER ILECS IN MISSOURI PERMIT THE PORTING OF RCF NUMBERS?

A. The fact that other ILECs may voluntarily agree to port RCF'd numbers does not make that agreement an obligation for CenturyTel. This Commission should not make it an obligation either given that there are no industry standards and processes to accommodate location porting.

Q. FROM A PUBLIC INTEREST AND/OR POLICY PERSPECTIVE, ARE THERE OTHER REASONS WHY THE COMMISSION SHOULD NOT REQUIRE CENTURYTEL TO PORT RCF NUMBERS?

A. Yes. In its First Report and Order, the FCC concluded "that requiring service or location portability now would not be in the public interest." (¶ 182). The FCC went on to identify the "many problems" posed by implementing location portability, problems that would be imposed upon CenturyTel if the Commission adopts Socket's position. Most of the parties responding to the FCC's NPRM on LNP agreed that implementation of location portability poses many problems. In the Order (¶ 176), the FCC lists these problems as:

(1) loss of geographic identity of one's telephone number;

(2) lack of industry consensus as to the proper geographic scope of location portability;

(3) substantial modification of billing systems and the consumer confusion regarding charges for calls;

(4) loss of the ability to use 7-digit dialing schemes;

(5) the need to restructure directory assistance and operator services;

(6) coordination of number assignments for both customer and network identification;

(7) network and switching modifications to handle a two-tiered numbering system;

(8) development and implementation of systems to replace 1+ as toll identification; and

(9) possible adverse impact on E911 services.

Q. CAN YOU BRIEFLY FURTHER DEFINE THE FCC'S LIST OF PROBLEMS?

A. In the Order (¶ 184), the FCC clarifies in its own words that its "chief concern is that users currently associate area codes with geographic areas and assume that the charges they incur will be in accordance with the calling rates to that area. Location portability would create consumer confusion and result in consumers inadvertently making, and being billed for, toll calls. Consumers would be forced to dial ten, rather than seven, digits to place local calls to locations beyond existing rate centers. In order to avoid this customer confusion, carriers, and ultimately consumers, would incur the additional costs of modifying carriers' billing systems, replacing 1+ as a toll indicator, and increasing the burden on directory, operator, and emergency services to accommodate 10-digit dialing and the loss of geographic identity. "

Continuing on (¶ 185), the FCC states "In addition to the disadvantages, the demand for location portability is currently unclear. There is no consensus on the preferred geographic scope of location portability. Also, users who strongly desire location portability can use non-geographic numbers by subscribing to a 500 or toll free number. Finally, whereas having to change numbers deters users from switching service providers, we believe that a customer's decision to move to a new residential or business location generally would not be influenced significantly by the availability of number portability. Therefore, location portability will not foster the development of competition to the same extent as service provider portability."

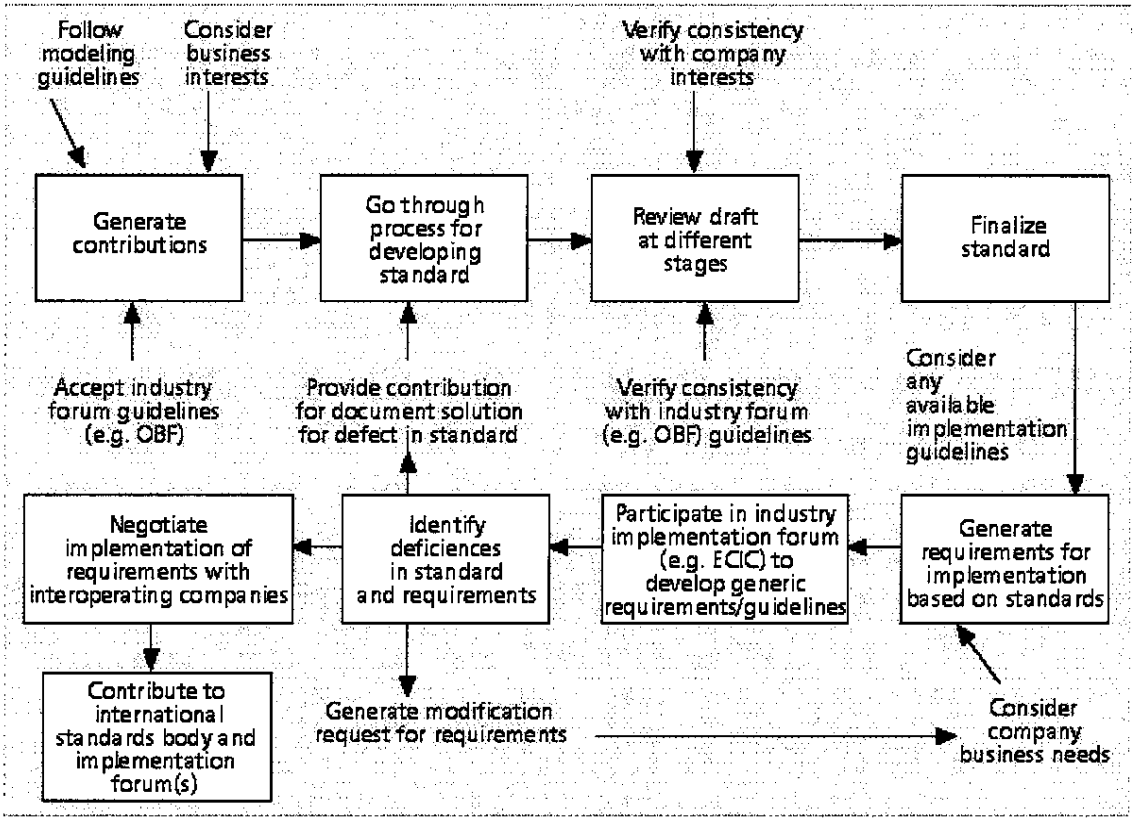
Q. ARE THESE LOCATION PORTABILITY ISSUES ITEMS THAT ARE APPROPRIATE FOR AN INTERCONNECTION AGREEMENT TO ADDRESS?

A. No. Some are issues for the FCC to address in rule making proceedings, while others are issues that need resolution through an industry standards process. It would be premature and inappropriate for these issues to be decided by carriers and addressed in an

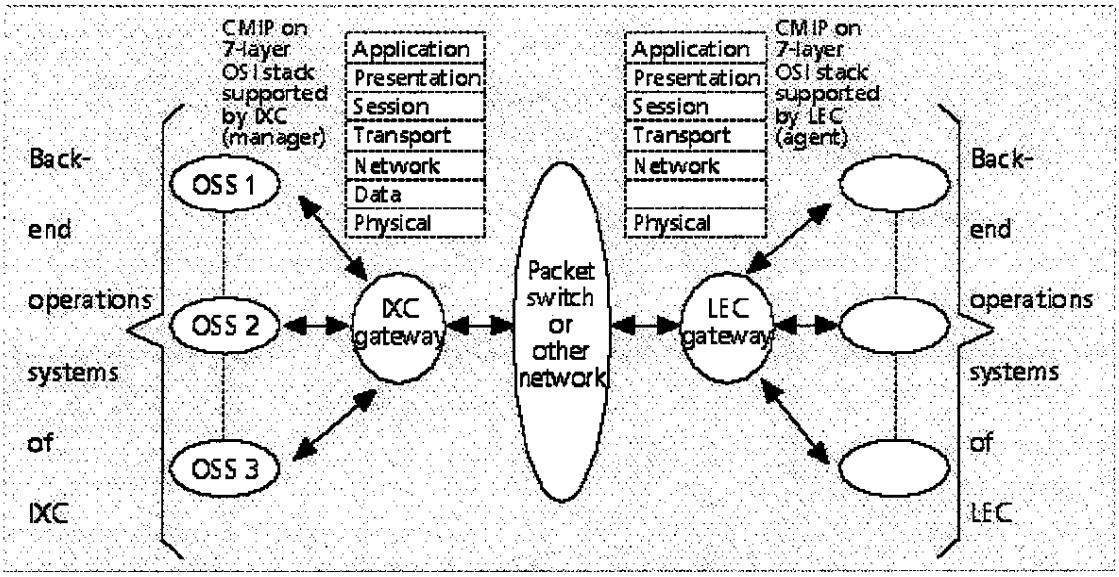
interconnection agreement, particularly since the FCC has stated that an ILEC's number portability obligations to do not require it to provide location portability, which is precisely what Socket's proposal would require.

Q. BEFORE CONCLUDING YOUR TESTIMONY, DO YOU HAVE ANY FINAL STATEMENTS OF A GENERAL NATURE REGARDING THE TERMS OF THIS INTERCONNECTION AGREEMENT?

A. Yes, I do. As I have related several times throughout my testimony, one of CenturyTel's overriding concerns is the ability of other CLECs to MFN into this agreement. To that end, any statement that Socket makes in its testimony to the effect that it does not interpret the language in a manner harmful to CenturyTel or it would not take advantage of CenturyTel in the way CenturyTel presents is irrelevant. However Socket may interpret language or whatever Socket may state on its own behalf is obviously not binding on any other MFN'ing CLEC. This Commission must take the agreement language at face value and consider the different contexts in which that language may be interpreted and used. This is exactly what I have done in my testimony.



Process flow for standards development



Overview of typical electronic communication interconnection

Published in the September 1996 issue of *IEEE Communications Magazine.*

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.