

W. Scott Randolph  
Director – Regulatory Affairs



Verizon Communications  
1300 I Street  
Suite 500E  
Washington, DC 20005

Phone: 202 515-2530  
Fax: 202 336-7922  
srandolph@verizon.com

June 26, 2003

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

**Ex Parte: CC Dockets No. 02-33, 95-20, 98-10, and 01-337**

Dear Ms. Dortch:

In *ex partes* dated May 20, 2003 and June 18, 2003, as well as in earlier filings and comments in this proceeding, Verizon has shown how technology and competition have negated any potential justification for the continued application of the Open Network Architecture (ONA) and Computer Inquiry (CI) rules. In particular, their extension to broadband significantly impedes the development of broadband services to consumers, competition and carrier investment. Streamlining the current rules as proposed by some parties does not solve these problems. Verizon submits more detailed information regarding the harms of such regulation.

As shown in the examples that follow, the separation of transmission components from other service functions, the pointless duplication of infrastructure facilities and the requirement to offer broadband services only via a generally available tariff results in significant real world costs. This is particularly true for services supported by new digital technology that doesn't distinguish between voice and data and certainly not between "basic" and "enhanced." While parties that support continued regulation urge the Commission to require cost estimates to demonstrate the effect of these outdated regulations, the most significant harms imposed by the current rules, as illustrated below, are reflected in lost opportunities to more efficiently provide services to customers such as ISPs, businesses, government entities and other institutions, which in turn affects the options and prices of high speed services that are ultimately made available to consumers.

**I. The Computer Inquiry Rules Impede the Deployment of Broadband and Harm Consumers**

Following are specific examples of how the Computer Inquiry and tariff filing requirements have hindered the development of new services and more efficient network architectures and have resulted in lost opportunities for Verizon to provide network and service arrangements that customers want.

**A. Development of New Consumer Services – VoIP as an Example**

In the transition from narrowband to broadband technologies, emerging communication networks will rely more on protocol processing, interaction with stored information and on new computing and Internet "technologies" that cannot be easily separated into artificial regulatory components. Networks

are evolving from circuit switches to packet switches, from TDM to ATM/IP protocols, and from centralized architectures to distributed architectures with equipment with integrated functionality.

The distinction between communications and web-based services will diminish as new “applications” increasingly are run on “server farms” instead of a traditional circuit switch, and calls can be processed and features added from anywhere. Servers, deployed in distributed network architectures, achieve significant cost efficiencies by integrating features and applications – independent of their “regulatory classification.” Indeed, many new broadband features are not discrete elements but rather are different options delivered from an application server.

In a softswitch environment, application servers interact with user data and controllers to route voice and data through IP-based networks to various gateways. While certain capabilities and functions reside in specific locations on circuit switches in legacy networks, in the softswitch architecture those features are distributed and routed among various components of the IP network (see Diagram 1). Under these circumstances, isolating a basic transmission service from an enhanced service can be extremely difficult, if not impossible. Even if a basic service could be identified, altering the network just to separate it as a unique network element and creating new back-office systems to support it destroys the cost efficiencies gained by using the technology and increases operation costs with little, if any, corresponding benefits.<sup>1</sup>

A good example of an emerging application of this type is voice over IP (VoIP). While VoIP services have been under development for some time, quality has recently improved and various providers, including cable modem providers, are expanding commercial marketing of this service. The efficiencies of integrated capabilities and sharing of resources have driven the development of the technology used to enable VoIP. Diagram 2 depicts a generic VoIP configuration where disparate capabilities such as voice mail, web collaboration, instant messaging, calendar, conferencing, basic voice and custom calling features are all provided on an integrated basis via servers in the IP network instead of a traditional circuit switch.

In past decades, equipment manufacturers designed central office equipment based on the needs of the Bell companies. Today’s manufacturers have broader markets and are designing the next generation of equipment for a broader base of IP network providers. For instance, WorldCom/MCI recently announced plans to move its entire network to IP technology by 2005 (Dow Jones News, June 3, 2003), and four of the largest cable MSOs in the nation (Cablevision, Time Warner, Comcast and Cox) have announced plans to aggressively pursue VoIP over the next several years (Communication Daily, June 6, at 6). As VoIP markets develop, manufacturers will focus on the need of the market leaders in the industry. In this case, this is the cable companies, which control 65% of the market for high-speed Internet access and who are free to utilize technologies that integrate VoIP capabilities irrespective of whether they are “basic” or “enhanced.” Manufacturers today are accommodating these needs and are reflecting the cost efficiencies associated with functional integration in their equipment prices.

There are also numerous non-cable-company VoIP providers in the marketplace today, and there presumably will be more in the future. Such “stand-alone” providers include such firms as Vonage, VOCOM and Dialpad. Like cable companies, these providers are free to use the most efficient products

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<sup>1</sup> Earthlink, in its *ex parte* of May 12, 2003, makes the entirely false assumption that “the BOCs have already invested in existing procedures, systems, and network designs to comply with their *Computer Inquiry* obligations today.” As explained herein, each time Verizon attempts to introduce a new broadband service it must create new network interfaces and make significant investments in new systems or modifications to existing ones. Indeed, these system and procedure-related requirements represent the bulk of the costs it incurs to introduce a new service or feature and can often be a major determining factor in the decision to forgo development of the service itself.

available and are not required to separate the physical components of their services based on regulatory distinctions.

ILECs have two choices in this environment. They can try to re-engineer the equipment designed for providers which do not share their regulatory constraints, creating additional costs and service delays. Alternatively, they can request that manufacturers modify their products to meet the service unbundling requirements, at higher cost to the ILEC than the costs incurred by their major competitors, and most likely many months after those competitors have received their equipment. These additional costs may result in the ILEC's deciding not to invest in the new technology at all. This not only affects consumers but also contributes to the continuing economic downturn in the telecommunications manufacturing sector.<sup>2</sup>

Design inefficiencies also lead to unnecessary operational complexities. Development of ILEC VoIP offerings would be delayed, as each function of the service must be analyzed for compliance with CEI and ONA rules – a time-consuming and complex undertaking. Artificial processes and interfaces would have to be developed to separate the underlying transmission service, even if there is no realistic expectation that there will be demand for the unbundled service from any third party. VoIP voice and certain calling features that are determined to be “basic” would have to be separated from other functions and made available at a “regulatory driven interfaces” which most likely are not those that are engineered by the equipment manufacturers. More important, each of these processes and interfaces requires the development or modification of associated operations support systems.

Service offerings also become complex and confusing to the customer and providers. While tariffs are required for services determined to be basic under the rules, other features and capabilities are not tariffed. This disjointed approach to service provisioning adds to customer frustration when it results in multiple rate applications (basic vs. enhanced / tariffed vs. contract) for a service the customer perceives as an integrated package.

The existing rules also complicate operations, provisioning and repair. Competitors can pick and choose individual features and services they want from Verizon, rather than the entire integrated package of services, and they can use them to provide whatever advanced services they choose. Verizon must insure that there are sufficient processes and interfaces to allow the competitor to report troubles as to each service it uses that work effectively no matter what service the competitor is providing to its customers, and Verizon must provide adequate testing capabilities to isolate potential problems related to individual basic elements. In addition, complex coordination with other providers and potential interoperability of equipment can cause repair delays.

VoIP is but one example of a new and emerging consumer service that ILECs will need to provide in order to be competitive with cable and other broadband providers. ILECs should not have to endure the network inefficiencies and added operational costs that are not borne by their competitors. If they are, consumers will only face higher prices and fewer alternatives for new IP based services.

## **B. ISP Connectivity**

Verizon recognizes the substantial value of providing a wholesale broadband offering to ISPs and intends to provide unaffiliated ISPs private carriage access to Verizon's network. However, as technology and markets rapidly change, common carrier regulation can no longer provide the flexibility needed for Verizon to serve the needs of ISPs and new content providers.

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<sup>2</sup> See *Catena ex parte* of February 7, 2003, stressing the importance for “Catena and other telecommunications manufacturers that the Commission adopts rules in the broadband proceedings that will not create disincentives for the incumbent carriers to develop new packet-based technologies.”

For example, in recent months, several ISPs have approached Verizon with requests to provide DSL access in a more efficient and cost-effective manner. However, the constraints imposed by CEI and tariff rules have made creating a service of this nature extraordinarily difficult and costly.

Diagram 3 depicts a generic broadband traffic aggregation architecture where an ISP's end user data traffic is routed through Verizon's DSL and fast packet network to the hand-off at an ISP's router location. In this example, the end user's transmission is carried over the Verizon network and delivered to the ISP's router. After the ISP authenticates the customer (that is, end user log-in, password verification, etc.), the ISP has this traffic sent to the Internet. Some ISPs have asked Verizon to perform the IP conversion for them, and one ISP has asked that Verizon perform the end user authentication functions. These arrangements would be efficient and would make it unnecessary for the ISP to invest in additional network equipment.

The current Computer Inquiry rules make it very difficult to respond to individual requests to provide these network capabilities. Under the rules, Verizon would be required to separately identify the underlying transmission components from other aspects of the service, such as the authentication functionality, and develop a new generic service offering that could be made available to any other requesting ISP even if only a limited number of ISPs are interested in this configuration. The offering would have to reflect the multitude of possible IP conversion locations in the network and the various options and functions different ISPs might want. Systems would have to be developed or modified to handle ordering, billing and repair processes; prices would have to be developed according to regulatory, as opposed to market guidelines; and tariffs would have to be filed in accordance to the review processes of the Commission. All these activities add significant costs and delays that would not be incurred if Verizon had the ability to customize arrangements to fit the unique needs of these few ISPs. Consequently, while Verizon may be willing to accommodate these requests, it has elected to date not to do so because of the additional complexities, resource demand and added cost of creating a new generic tariff offering as required by existing rules. The result of the current rules is to effectively restrict ILECs to offering a limited set of service configurations and wholesale broadband prices using the same technology to all ISPs.

In contrast, a Title I private carriage regime of freely negotiated agreements would permit delivery of new services and applications sooner, reflecting the risks and rewards of new service deployment. For example, an ISP or content provider might want to provide a new service, application, capability, etc. in conjunction with DSL. If this service is untested in the market, it might be perceived to be a risky undertaking, which may persuade Verizon not to provide it if Verizon is limited only to revenue associated with the published tariff rate. On the other hand, Verizon might have the incentive to take the risk if in turn for providing an attractive rate for the new functionality it is guaranteed a percentage of the service's revenues.

Similarly, instead of a straight percentage of revenues there could potentially be a charge for every end user "click" to the ISP's application or web site. Or, in turn for an attractive wholesale DSL price, the ISP might agree to market Verizon services through its presence on the Internet (using certain frames or even pop-up ads, etc.). Further, an ISP and ILEC may agree to different pricing structures based on different provisioning and quality of service offerings, such as lower rates for more flexible repair intervals.

Also, Verizon will be far more willing to risk experimenting with new types of arrangements for services for content providers if it can evaluate the results of such offerings and is not required to immediately offer such experiments to all comers.

The Computer Inquiry regulations that require ILECs to separate basic transmission services from enhanced functionalities and provide non-discriminatory access to the same functions, features and capabilities and at the same terms and conditions equally among all customers prevents Verizon and ISPs from entering into these types of mutually-beneficial agreements. It also stifles innovation as it

precludes ILECs from partnering with individual customers to test the market with new and different service and pricing structures, which, if successful, could be extended to other service configurations and providers. In order for ILECs to be able to respond to the demands of the market, as its competitors do today, Title II common carrier regulation of ILEC broadband services must be removed and replaced by a Title I framework.

### **C. Provision of DSL Services to Other Customers**

Restrictions on the ability to accommodate differing service needs are not limited to ISPs or content providers. For example, several universities and colleges have requested that Verizon provide DSL capabilities to its students and administrative offices. These schools wanted to market high-speed access services on their own, sparing Verizon the expenses associated with acquiring new customers. In return, the schools expected a reduced price from the price in existing Verizon tariffs.

In another case, a local school board requested DSL service for a specific period of time that coincided with its municipal funding and election cycles, again terms that were not provided for in Verizon's existing tariffs. To accommodate these customers, Verizon would have had to design and file a new generic tariff offering and deploy associated new supporting operational and billing systems, even though it would have been extremely unlikely that any other customer would have wanted the same terms. Similarly, the federal government typically requires contract terms of at least ten years. Because of the stability of contracting services with the federal government, Verizon might elect, for example, to waive up-front charges that it may be unwilling to do so with less stable customers. This cannot be easily accomplished under a Title II regime.

Finally, a local government recently approached Verizon with a proposal to purchase its own DSLAM equipment, have Verizon maintain that equipment and use it to provide DSL service to that community. Unfortunately, Verizon could not agree to such an arrangement under existing Commission rules. Specifically, Title II non-discrimination restrictions would require Verizon to offer the same arrangement to others on the same terms and conditions, even though the needs and characteristics of individual municipalities or other large customers could differ substantially. And the Computer Inquiry requirements would force Verizon to tariff a new generic DSL offering of this sort and incur the costs of developing and maintaining such an offering, even if no other entity was interested in the same arrangement. The imposition of these unnecessary regulatory-induced costs made it prohibitive for Verizon to meet this town's request.

### **D. Application of CI Rules to Non-Internet Applications**

CI rule impediments to broadband are not limited to Internet applications; they also restrict services provided to businesses of all sizes. For example, LAN-to-LAN and Frame Relay-to-ATM configurations often involve the interconnection of disparate interfaces and protocols. Many are unique customized arrangements requested by individual customers to meet their specialized requirements. Each time Verizon elects to provide arrangements such as these, it must first isolate a separate telecommunication service from those that are enhanced, which, as stated above, is becoming increasingly difficult to do using newer technologies. This is particularly complex to achieve for these arrangements involving Converged Access Services, which provide integrated access to multiple services, protocols, etc. and IP virtual private networks, which involve multiple interfaces such as Frame Relay-to-ATM, ATM-to-Ethernet, and Frame-to-Ethernet, etc.

Finally, many providers of local telephone services, including CLECs, are offering "follow me services" which require the interaction between the public switched telephone network and the Internet to provide advanced calling features, such as the ability to retrieve voice mail messages remotely via a computer. Functions such as these demonstrate that the difference between "enhanced" and "basic" services is rapidly blurring, which makes it more costly and time consuming for ILECs to deliver these applications. Often, the additional time required to perform a technical-legal review of the service, to determine what is enhanced versus basic and what functions must be provided by a separate affiliate or

handled as a non-regulated service, and the tariff development, support and review process could add months and even years to the normal product development cycle. This, in turn, jeopardizes the potential economic success of the service, particularly if ILECs are not able to effectively introduce services in response to competitor's offerings.

#### **E. Costs and Harms Imposed by the CI Rules Are Significant**

The Computer Inquiry rules impose excessive costs on Verizon by forcing it to offer "one size fits all" service configurations even though more flexible arrangements would result in reduced costs for customers, including ISPs, and Verizon. They also have effectively prevented Verizon from responding to numerous requests to provide non-standard services, serving arrangements and terms. Moreover, it is simply not practical (or profitable) for Verizon to go through the whole CI-tariff process for each one of these one-of-a-kind arrangements. The requirement to design multiple generic networking options, services and pricing plans for each of the examples cited above and reflect each of them in a tariff is not only unwieldy, but is also cost prohibitive. Therefore, under the current environment, Verizon is forced to offer plain vanilla versions of high-speed services even though it in turn impedes the ability of its customers, including ISPs, businesses, communities and governments, from delivering the services and applications that consumers ultimately demand.

#### **II. The April 30<sup>th</sup> Earthlink/AOL/MCI Proposal Maintains Much of the Status Quo**

The April 30<sup>th</sup> proposal of Earthlink/AOL/MCI suggests that the Commission maintain Title II regulation but "streamline" the rules that would govern the BOCs' provision of broadband services. The proposal would eliminate the complex reporting and posting requirements of the CI and ONA rules and even the requirement that services be offered under tariff, which would indeed reduce costs that are needlessly incurred by the BOCs today. However, these costs, which are not insignificant, are minimal in comparison to the burdens imposed by the remaining rules. More important, these changes do nothing to deal with the fundamental problems illustrated above, that Verizon is unable to provide customers specially designed arrangements, specially designed terms and conditions or experimental offerings. Nor do they address the uneconomic service/equipment unbundling requirements of the rules. The most egregious aspects of the current CI regime would remain if this proposal were adopted.

First, BOCs would remain subject to a requirement that it offer "all of its high-speed network transmission services and capabilities on just, reasonable and nondiscriminatory rates, terms, and conditions." BOCs would also remain subject to the requirement to separate "basic" and "enhanced" services in that their transmission services must be "separate from any other BOC services, including enhanced or information services" (proposed rule § 64.702(c)(1)). The proposal claims that this would not restrict the ability of the BOCs to "establish broadband terms that are novel or tailored to the needs of specific ISP customers (page 7).

To the contrary, this proposed rule would provide a disincentive for ILECs, unlike their cable competitors, from entering into non-traditional compensation arrangements, such as revenue sharing or exposure-based fees. Because of the separation requirement, an ILEC's contract with an ISP, or any other customer, could not include any considerations except the charges for the transport offering and closely related provisions, even though ILEC/ISP broadband deals are likely to reflect a broad range of considerations beyond just the provision of transport capacity. Such arrangements require a close working relationship (*e.g.*, cross-promotions, cooperative service design, unique branding) going well beyond the typical carrier/customer setting, which an ILEC cannot feasibly offer to all comers.

The ability to negotiate in an unencumbered fashion is essential to enable both parties to minimize their risks given uncertain demand for innovative broadband services and products. If a BOC is required to offer the same exact terms to any other requesting party, as these ISPs propose, it may elect to forgo certain opportunities that could have been beneficial for both the ISP and consumers. In addition, the proposal would restrict the BOC's ability to offer special arrangements in particular geographic areas in order to respond to competition. Finally, by establishing these proposed rules under

a Title II framework, BOCs would likely be beset by complaints alleging that creative compensation arrangements are not "just and reasonable" because they are not based on the cost of providing the transport service alone.

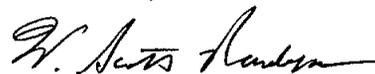
Second, the proposed § 64.702(2)(B) and (C), which would require the posting of the details every single contract on the BOC's web site and, potentially, the advance notification to all ISPs anytime those terms change would be administratively unwieldy and could restrict negotiations between the BOCs and ISPs. Verizon interconnects with hundreds of ISPs. Verizon anticipates that even under its proposed Title I framework, many service arrangements with ISPs may be provided on fairly standardized terms and conditions. However, even slight differences among agreements in "classifications, terms or practices" would require separate postings under the proposal which could require BOCs to continuously update and maintain details on hundreds of contracts. Although this proposal eliminates much of the current reporting and posting rules, it replaces them with an equally administratively burdensome rule. In addition, making publicly available all of the terms and conditions of each individual agreement could inhibit the ability of negotiating parties to reach mutually beneficial agreements, particularly if an ISP or other customer considers aspects of their agreements to be competitively sensitive.

Third, the proposal requires a BOC to provide access to any new transmission service and capability that it may implement in its network and even access to arrangements that the BOC ISP itself does not use (proposed § 64.702(c)(3)). This requirement is no different than the current rule that forces the BOCs to separate and offer a standalone transmission service for resale purposes. Again, the anticipated evolution of broadband technology and its deployment in the network will preclude the isolation of a separate transmission component from other services. The proposed rule would also stifle innovation and the development of new capabilities as ILECs would remain subject to a resale requirement that would continue to force them into taking a "one size fits all" approach. In addition, no ISP should be allowed to dictate how the ILEC operates and designs its network, deploys technology, or introduces new services and discontinues obsolete ones. For the very same reasons that the Commission declined to mandate Section 251 unbundling of the ILEC's fiber networks, it should refrain from imposing CI obligations on ILEC's new broadband services.

Finally, the proposed new rule for enforcement of ISP access is unfairly one-sided and obtrusive (proposed § 1.737) As Verizon stated in other pleadings in this docket, despite some ISP's broad allegations of BOC wrongdoings, few complaints have been filed at the Commission regarding Verizon's compliance with the existing CI rules. Therefore, it is questionable why a new rule should be established in this proceeding. Nevertheless, the proposed rule places most of the burdens on the defendant (*i.e.*, the ILEC), identifying the specific data that must be filed to answer a complaint and a rebuttable presumption that automatically rules in favor of the complainant if the required information is not submitted or doesn't even exist. In contrast, the proposed rule is silent as to the burden of proof required of the ISP. Clearly, the Commission should avoid adopting such a rule – its existing enforcement practices are sufficient to handle any future problems even under a Title I regime.

Please associate this notification with the record in the proceedings indicated above. If you have any questions regarding this matter, please call me at (202) 515-2530.

Sincerely,



W. Scott Randolph

Attachments

Ms. Marlene H. Dortch  
June 26, 2003  
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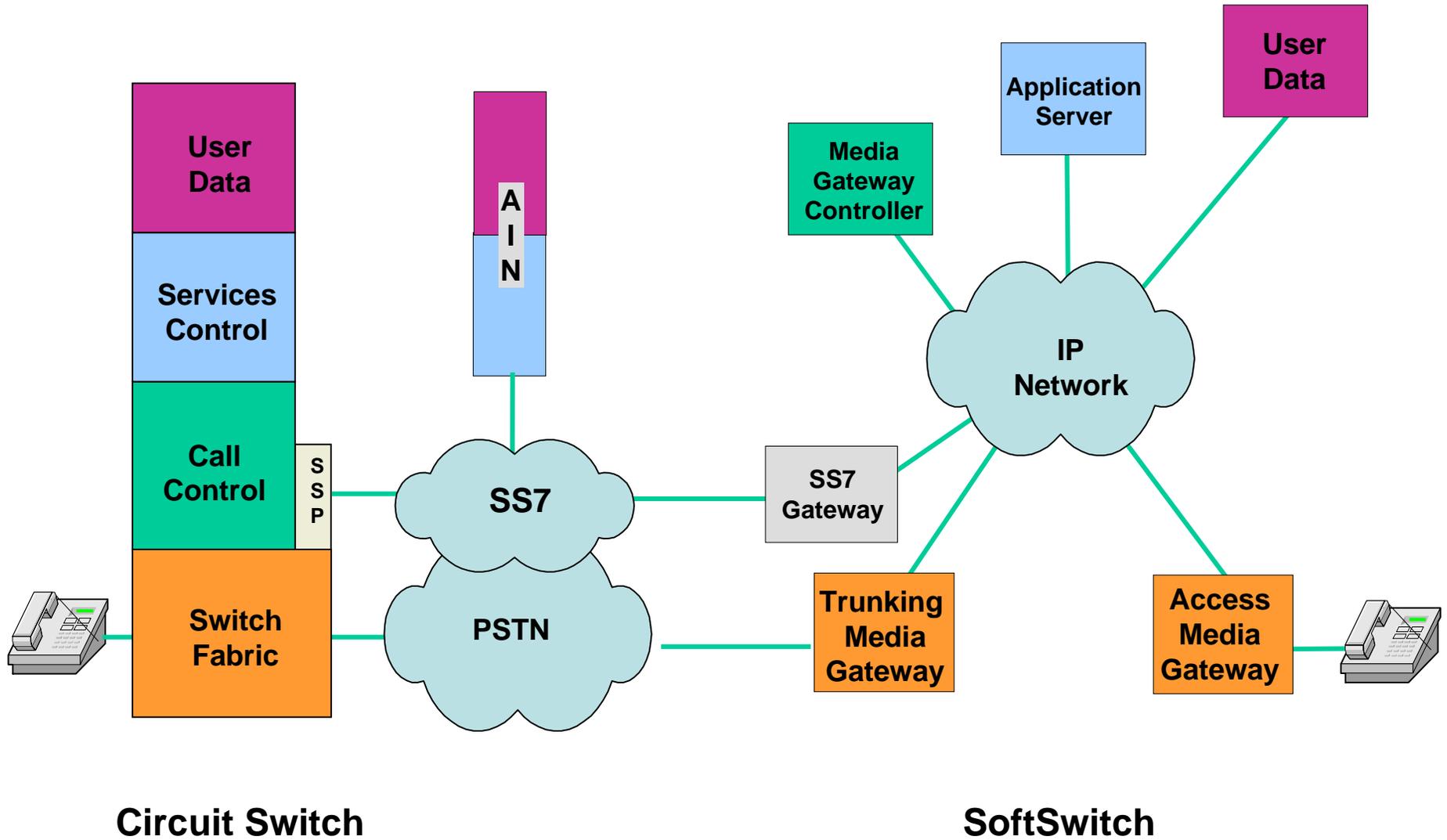
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Matt Brill  
Dan Gonzalez  
Jessica Rosenworcel  
Lisa Zaina  
Scott Bergmann

Robert Pepper  
Simon Wilkie  
Scott Marcus

William Maher  
Carol Matthey  
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Brent Olson  
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Darryl Cooper  
Terri Natoli  
Ben Childers  
Michael Carowitz  
Harry Wingo

Kyle Dixon  
Barbara Esbin

# Diagram 1 - Softswitch Architecture

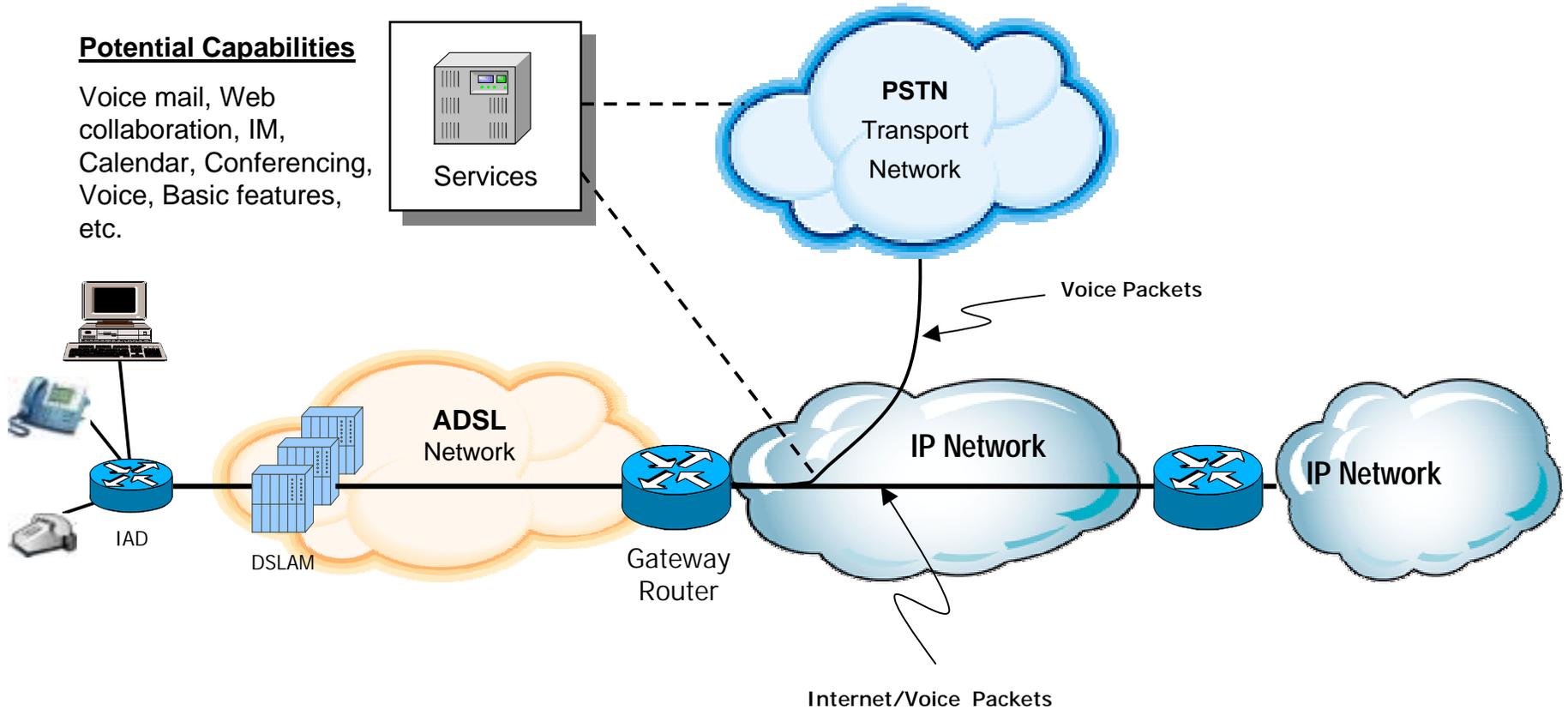
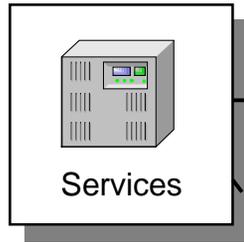


# Diagram 2 - Generic VoIP Architecture



### Potential Capabilities

Voice mail, Web collaboration, IM, Calendar, Conferencing, Voice, Basic features, etc.



# Diagram 3 - Generic Broadband Traffic Aggregation Architecture

