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USWEST

Elridge A. Stafford
Executive Director-
Federal Regulatory

EX PARTE

September 11, 1997

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW, Room 222, SC-1170
Washington, DC 20554

RE: CC Docket No. 96-115; CC Docket No. 96-149;
WT Docket No. 96-162

Dear Mr. Caton:

Today, Kathryn Krause and the undersigned, representing U S WEST, met with Dorothy Attwood, Lisa Choi, Raelynn Tibayan-Remy, Tonya Rutherford and Jeannie Su of the Policy and Program Planning Division, Common Carrier Bureau, to discuss the attached documents. These documents were previously filed with the Commission, respectively, on September 9, 1997 and September 10, 1997.

In accordance with Commission Rule 1.1206(a)(2), an original and one copy of this letter and the attachments are being filed with you for inclusion in the public record for these proceedings.

Acknowledgment and date of receipt of this submission are requested. A copy of this transmittal letter is provided for this purpose.

Please call if you have any questions.

Sincerely,

Elridge Stafford

Attachments
cc: Ms. Dorothy Attwood
Ms. Lisa Choi
Ms. Tonya Rutherford
Ms. Jeannie Su
Ms. Raelynn Tibayan-Remy

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ex Parte

September 9, 1997

Dorothy T. Attwood, Esq., Senior Attorney
Common Carrier Bureau
Policy and Program Planning Division
Federal Communications Commission
1919 M Street, N.W., Room 533
Washington, D.C. 20554

RE: Customer Approval For Internal Access, Use and Disclosure of Customer Proprietary Network Information ("CPNI"), CC Docket No. 96-115; Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended, CC Docket No. 96-149; and Amendment of the Commission's Rules to Establish Competitive Service Safeguards for Local Exchange Carrier Provision of Commercial Mobile Radio Services, WT Docket No. 96-162.

Dear Ms. Attwood:

Reason for *Ex Parte* Filing and Statement of Position

The purpose of this communication is to reiterate U S WEST's objection to the enactment of any rule under Section 222 of the Telecommunications Act of 1996 ("1996 Act" or "Act") that would engraft on that legislative provision an affirmative customer consent requirement as a condition precedent to U S WEST's internal access, use or disclosure of its business information for lawful business purposes. Such a rule would be contrary to the best and most credible current record evidence; would represent an unreasonable interpretation of the existing statutory language and the legislative history associated with Section 222; would represent a departure from past Federal Communications Commission ("FCC" or "Commission") positions with respect to the public and competitive benefits associated with information sharing; would be contrary to commonplace commercial and industry practice and to customer expectations; and would impact U S WEST's business in a manner that violates both its property and free speech

rights. There is simply no sound reason to define the statutory term "approval" beyond the common business context, wherein such "approval" is generally presumed based on existing business-customer relationships.

Below, U S WEST describes an affirmative consent CPNI trial which it conducted at the end of 1996 and the beginning of 1997. The purpose of the trial was to ascertain U S WEST's likelihood of success in securing affirmative customer consent – either written or oral – to access, use or disclose CPNI. As U S WEST has a lawful right to use its business information internally, it wanted to discover just how seriously an affirmative consent rule promulgated by the Commission might disrupt its rights.

The results of U S WEST's trial demonstrate that affirmative consents cannot be secured in any meaningful numbers. Therefore, were an affirmative consent requirement imposed on U S WEST before it could access, use or disclose CPNI internally, U S WEST personnel would essentially be cut off from access and use of U S WEST's own internal business information to run and grow its business. This would constitute not only an unlawful suppression of speech under the First Amendment,[1] but a *per se* appropriation of U S WEST's property, both in the absence of any Congressional grant of authority to the Commission to undertake such extraordinary and constitutionally significant actions.[2]

In various filings with the Commission, U S WEST has made no secret of its proprietary rights to its internal commercial business information, including its internal business records, even where those records reference or relate to individual customers.[3] U S WEST owns its commercial business information which is incorporated in its business records generated in the normal course of business. Those records include individually-identifiable information that relates to its customers. However, its customers do not "own" the information contained in

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[1] Ex Parte letter of Laurence H. Tribe, dated June 2, 1997 at 2-3 ("Tribe Letter"). See Comments of U S WEST, Inc., CC Docket No. 96-115, filed Mar. 17, 1997 at 2.

[2] There are a number of legal problems that attend a taking of U S WEST's property in the context of Section 222. First and foremost is the absence of any specific or clear legislative language that such a taking was contemplated by Congress. Bell Atlantic Telephone Companies v. FCC, 24 F.3d 1441, 1446 (D.C. Cir. 1994). Second, even if authorized as a general matter, there would be a serious question as to the public purpose sought to be achieved if individuals were granted a sort of black-ball authority with respect to proprietary commercial business information that pertained to them. And, even if the "purpose" were found legally permissible, a mechanism to compensate companies for the loss of their property which would result from the fact that affirmative consents from customers cannot be secured in any meaningful numbers would need to be crafted.

[3] Comments of USWC, CC Docket Nos. 90-623 and 92-256, filed Apr. 11, 1994 at 26, 28 n.54; Reply Comments of USWC, CC Docket No. 90-623, filed Apr. 8, 1991 at 73-75; Comments of USWC, CC Docket No. 90-623, filed Mar. 8, 1991 at 64 n.220.

U S WEST's business records any more than a customer of a department store "owns" the information kept in that store's commercial records.[4]

While U S WEST might be able to minimize the impact of losing access to records that relate specifically to individuals by aggregating CPNI,[5] the consequences associated with such aggregation are undesirable. First, the ability to target an individual for a particular offering is compromised significantly. Second, the statute requires mandatory sharing of aggregate CPNI, which U S WEST believes raises serious equal protection problems.[6] Neither the statutory language nor the record evidence suggests that U S WEST should be confined to the use of only aggregate business information in operating its commercial enterprise, particularly when there are negative consequences associated with the use of such information.

The evidence of record, offered primarily through focus group evidence and statistically valid public opinion survey evidence, demonstrates that individual consumers do not object to a business' ownership interest or use of commercial information in the normal course of business. And, there is clearly nothing in Section 222 that suggests that Congress meant to displace this commercial business interest or expropriate the property of telecommunications carriers in the absence of affirmative customer consent granting companies access and use of their business information.[7]

The Commission could lawfully interfere with U S WEST's constitutional rights only upon express Congressional authority and in support of a significant governmental interest in correcting some clear public harm. The existing record fails to demonstrate either. Absent such demonstration, any regulatory mandate that failed to give proper protection to U S WEST's commercial proprietary interests in its business information at an individually identifiable level would be unlawful.

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[4] Indeed, while it is clear that Congress meant to endow customers with certain control over information that relates to them which is in the hands of carriers, a telecommunications carrier does not "receive or obtain" (the language in Section 222) from its customers the information in its business records. Rather, customers ask for services and that information results in the telecommunications carrier generating a record that indicates, through telecommunications codes, the services to be provided (as well as any underlying necessary services). A reasonable interpretation of Section 222 could obviate any challenge to the applicability of the provision to internal business records.

[5] Section 222(c)(3), (f)(2).

[6] U S WEST's Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 20-21.

[7] Appendix B to this correspondence summarizes U S WEST's statutory interpretation and legislative history analysis associated with Section 222, for the Commission's easy perusal in this context.

The Commission has an obligation to construe Section 222 in a manner that upholds its constitutionality,[8] not that subjects it to constitutional challenge. Particularly in the absence of any Congressional suggestion that, in enacting Section 222, material and significant access barriers to the use of internal commercial information was contemplated, and in light of the general acceptance of individuals to the internal use of commercial information, the Commission must not impose an affirmative customer consent requirement on U S WEST's internal use of its commercial business information.

Internal Business Information Is Key To Strategic Planning And Growth As Well As Speech

Attached to this filing as Attachment A is a copy of an article from a recent issue of Telephony magazine that makes clear the importance to a business of internal business information, including individually identifiable information.[9] To the extent that the importance of such information in product design, planning and development has not been clear from prior submissions, U S WEST offers this article, which describes generally accepted business practice, as an addition to the record.

The commercial business information in U S WEST's possession, like that of other businesses, is "a key strategic tool"[10] that is calculated to foster the growth and development of U S WEST's commercial operations.[11] U S WEST's commercial information has spawned investment in internal information technologies that allow for better internal communication, integration of information (across both business units and product offerings), and decision-making[12] through information technologies associated with data warehousing,[13] data mining,[14]

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[8] See Edward J. Debartolo Corp. v. Florida Gulf Coast Building & Constr. Trades Council, 485 U.S. 568, 575 (1988).

[9] "The Cost of Entry," by Joan Engebretson, Telephony, August 11, 1997, at 18, attached hereto as Appendix A.

[10] Id.

[11] Id. (a Bell Atlantic executive is quoted as crediting data warehousing, in part, for the overall growth and development of the company).

[12] The Telephony article points out that the technology associated with data warehousing "is aimed at improving a company's decision-making capabilities." Id. and Table 1.

[13] Id. at 18, et seq. (describing different types and architectures associated with data warehousing).

[14] The article discusses data mining, where computer technology "uses statistical techniques such as decision trees and neural scoring to locate patterns in . . . data that users might not have thought to look for." Id. at 22. A cited example of data mining involves a Bell Operating Company that determined that high calling rates were occurring between a certain time frame and, from this knowledge, specifically marketed two different services to the customer households from which such calling generated. Later, the article mentions that U S WEST practices data mining and modeling. "The marketing intelligence group began by developing a model to predict transition – the likelihood that a customer will change carriers or increase or decrease spending with the company. The next project

potential text mining,[15] and the use of intelligent agents.[16] The information and the supporting technologies promote not just internal product design and development, but also customer targeting[17] and future communications with individuals – not necessarily with individuals to whom the business information relates specifically and not in a strictly marketing and sales context.[18]

The Telephony article points out that "[t]he advantage for corporate marketing [is] an integrated view of the company. 'The thrust behind integration is to better create multiproduct offers and target to the right segments.'"[19] Overall, the information in the possession of a business, and the technology that allows for manipulation of that information, is "especially valuable for marketing executives because a wealth of information can be obtained about a company's existing or potential customers, including those customers most likely to switch to a different carrier and the best prospects for new services."[20]

In a commercial enterprise such as U S WEST, "marketing executives" range from mid-level managers to the president of the company. All are interested in consumer buying trends and the ability to match certain consumers, or types of consumers, with the right product/service mix. In this context, one can hardly dispute the strategic nature of a company's commercial information, particularly as that information is manipulated by computer and information technology. Indeed, the successful utilization of both the commercial information itself and the supporting technologies drives U S WEST's network investment. In essence, U S WEST's commercial information, as well as the systems that support the use and manipulation of that information, are critical to the company's successful operation, educated decision making and future growth.

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will be to predict the next product a customer is likely to acquire, which will be followed by a campaign management project." Id. at 23.

[15] Id. at 24 (describing text mining as the taking, as input, "customer service records and other sources that are not easily quantified.").

[16] Id. (describing such agents as those that take information and format it so that vital information is automatically delivered to key company decision makers).

[17] Id. at 18 (a Bell Atlantic executive is quoted as crediting the targeting of customers as a growth and development action). See also a cited example of targeting that does not absolutely require the support of information technology such as data warehousing, but that can benefit from such technology, i.e., finding out how many people in a certain ZIP code pay their bills promptly and have Caller ID. Id. at 22.

[18] Id. at 24 (noting that a GTE executive is interested in looking "at groups of customers that behave similarly and link[ing] them to primary market research to better understand *how to communicate* with different behavioral groups.") (emphasis added).

[19] Id. at 20 (quoting, in part, a BellSouth executive).

[20] Id. at 18 (the quotation is referencing data warehousing specifically, but the concept is applicable equally to other information technologies).

Evidence of Record

The record in this proceeding is replete with evidence that runs counter to the imposition of a customer affirmative consent requirement before internal commercial business information can be used to run the business or communicate with individuals. For example, the record contains statistical evidence that, as a general matter, customers of local exchange carriers trust those carriers with respect to the information in their possession[21] and have no objection to the internal use of business record information (uses which might range from strategic decision making to product design and development).[22] The evidence also demonstrates that any marginal concerns about the use of such information can be overcome easily by notification of intended uses with opportunities afforded to opt out of particular uses.[23] That same record evidence demonstrates that a substantial part of the mass market of consumers is interested in receiving information about the products and services that are developed by local telephone companies through the use of internal commercial business information,[24] with some consumer populations being more interested than the average consumer.[25]

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[21] Survey, Question 2. (When making reference to the January, 1997, Pacific Telesis submission, "Public Attitudes Toward Local Telephone Company Use of CPNI, Report of a National Opinion Survey Conducted November 14-17, 1996," U S WEST makes reference to either the "Survey," which is actually Appendix E of the Report and reflects the actual questions asked the individuals polled, or refers to the "Analysis," by which it refers to the material included in Nos. 1-12.) As U S WEST has pointed out, this high trust level has been demonstrated in customer surveys since 1979. Reply Comments of U S WEST, filed Mar. 27, 1997 at 19 and n.76; U S WEST's Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 17 n.42, referencing 1991 USWC Comments, CC Docket No. 90-623, filed Mar. 8, 1991 at 65-66 (citing to various surveys and reports wherein customers expressed opinions that such companies did not over-collect information and were highly likely to maintain confidentiality).

[22] Survey, Questions 11-12. As U S WEST has advised, internal focus group work supports this Survey finding. U S WEST's Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 17 n.42, citing 1994 USWC Comments, CC Docket Nos. 90-623 and 92-256, filed Apr. 11, 1994 at 10-12 (advising of focus group research where participants indicated that they were well aware of the importance to a business of individually identifiable information and were quite comfortable with uses that they agreed to either directly or by implied consent).

[23] Survey, Questions 11-12. The Survey also demonstrates that individuals familiar with such opt-out notifications are aware of their content. Survey, Questions 5-6. Based on the fact that such individuals also demonstrate a higher-than-average interest in receiving information about products and services (Analysis at 5, 9), a clear implication arises that – by not opting out – many individuals are intentionally expressing their interest in receiving information from the entity sending out the notice. Reply Comments of U S WEST, CC Docket No. 96-115, filed Mar. 27, 1997 at 17-18.

[24] Survey, Questions 9-10.

[25] The Survey demonstrated that, for example, for the population at large, there is an interest in "receiving informational communications from businesses they patronize" (an approval rating of 88%) with certain customer segments (e.g., individuals from 18-34 years of age, African Americans, Hispanics) demonstrating an even greater interest (92%). Survey Questions 7, 9; Analysis at 5, 9. More specifically, with respect to communications from local telephone companies, 64% generally indicated an interest in communications about products and services,

All told, the existing record establishes that consumers have little to no concern about a company's internal use of its business information, and by a substantial majority do not even object to that information being used in a manner that specifically identifies individuals and operates to craft targeted communications.[26] While customers are concerned about information leaving U S WEST, they are not concerned about U S WEST's internal use of that information.[27]

The record also clearly demonstrates that the Commission has, over the last almost-20 years, been a champion of information sharing[28] and – only recently – clearly articulated the benefits to both competition and the public interest inherent in such sharing.[29] Indeed, the Commission's pro-information positions have been sufficiently persuasive to win judicial endorsement in more than one Circuit.[30]

The record further demonstrates that interference with U S WEST's right to internally access, use and disclose its commercial information to craft service offerings and frame relevant speech around those offerings would constitute a violation of U S WEST's First Amendment rights.[31] Regulatory destruction of the value of U S WEST's proprietary information would also constitute a compensable taking of U S WEST's property.[32]

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with certain customer segments expressing an even higher interest (69 to 79%). (The latter customer segments included those mentioned above with the ages changing to 18-24 and women joining the segmentation.)

[26] U S WEST is aware that certain commentors, such as the Consumer Federation of America ("CFA"), as well as non-consumer representatives, have filed positions supporting affirmative customer consent. The Commission must, however, weigh this evidence against the statistically valid factual evidence in the record that suggests strongly that advocates supporting affirmative customer consents are either uneducated as to the facts or biased in support of a particular end result, regardless of the facts.

[27] Compare Comments of Cincinnati Bell Telephone Company, CC Docket No. 96-115, filed June 11, 1996 at 2-3; USWC Comments, CC Docket No. 90-623, filed Mar. 8, 1991 at 64-68.

[28] The Commission's Computer II, Open Network Architecture and Computer III proceedings all evidence a pro-information-sharing position, with CPNI associated with individuals in the mass market restricted only upon affirmative denial of access and use. And see Commission's Ninth Circuit Brief in People of the State of California, et al. v. FCC, Nos. 92-70083, et al. (9th Cir., filed July 14, 1993) at 72, 96-97. And see note 29, infra.

[29] Commission's Final Brief in SBC v. FCC, Nos. 94-1637 and 94-1639 (D.C. Cir.) at 47, 49-50.

[30] People of State of Cal. v. FCC, 39 F.3d 919, 931 (9th Cir. 1994), cert. denied, 115 S. Ct. 1427 (1995); SBC Communications Inc., et al. v. FCC, 56 F.3d 1484, 1494-95 (1995) (noting that the Commission's decision to allow the sharing of CPNI furthered the public interest because the increased service offerings likely to result from the use of such information would be expected to lower prices and potentially grow the market overall).

[31] Tribe Letter at 5-10. Those who argue that a company such as U S WEST can speak in the absence of any known information about its customers, such as through general advertisements or "blindly" without regard to the specific characteristics of the customers spoken to, miss the point. U S WEST cannot be confined to speaking in such a blind and general way. It cannot be deprived of the ability to speak knowledgeably and with an educated voice to its own customers. For example, U S WEST has information in its possession that would allow for targeted

In light of the totality of record evidence, any regulatory requirement that individual customers must affirmatively consent to U S WEST's internal use of its commercial business records for the ongoing operation of its business and in formulating communications with those individuals or other similarly situated or like individuals simply because certain records reference or relate to individuals would be not only arbitrary and capricious but unconstitutional, as well.

Affirmative Customer Consent Cannot Be Secured Regarding CPNI

It has been stated by numerous entities that affirmative customer consent cannot be secured from mass market customers.[33] U S WEST recently conducted a trial which confirms the obvious correctness of such assertions. Affirmative consent cannot be secured, whether through written or oral means, in any meaningful numbers, with one exception. And, even with respect to the exception, there are variables that render its use problematic within the context of tying use of internal records to affirmative customer consent.

Before discussing the trial itself, it is important to note how the Commission's current Computer II/ONA/Computer III CPNI rules affect U S WEST's business and the use of its commercial information. Because of the limited number of individuals that have requested restriction of record information that pertains to them, there is no significant impact on U S WEST's business from removing the use of those records from U S WEST's business operations. Only .06% of U S WEST's residential customers have requested restrictions; 3.6% of small business customers[34] and 33% of large business customers (which percentage includes customers who are also competitors and would therefore be expected to restrict CPNI) have

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communication with its customers (see note 17, supra). There is no reason why U S WEST's communication with its receptive customers should not be educated by those facts, as well as the trending, information correlations and product intelligence associated with the information. Nor can U S WEST be put in a position where a general/blind communication model creates confusion between itself and its customer or impedes the normal and expected flow of communication within an existing business relationship.

[32] Ruckelshaus v. Monsanto, 104 S. Ct. 2862 (1984); Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992).

[33] Compare Comments of GTE Service Corporation, CC Docket No. 96-115, filed June 11, 1996 at 6 n.9, wherein GTE estimated that "no more than 27 percent of residential customers are likely to provide a written response to the company's request, and the response rate of residential customers might be as low as five percent." GTE also states that its expectations for a response from its small business customers "would not exceed five percent." Id. Comments of Sprint Corporation, CC Docket No. 96-115, filed Mar. 17, 1997 at 2-3 (Sprint describes its recent experience requesting written authorization and notes that very few customers responded).

[34] While some small business customers have more than 20 lines, and thus must affirmatively approve U S WEST's CPNI use, most have fewer than 20 lines. The CPNI communication provided to them is in the nature of an opt-out notification. The numbers of restrictions are in line with what one would expect for such a communication.

restricted U S WEST's record information referencing them.[35] Moreover, the restrictions are limited to the use of U S WEST's commercial information with respect to certain types of conduct (i.e., marketing and sales) in conjunction with limited types of services (i.e., enhanced services and customer premises equipment ("CPE")), that – while complementary to U S WEST's business – do not represent the core business.

An affirmative consent requirement as an implementation of the language in Section 222 would substantially and materially increase the number of records that are "closed" to U S WEST. Essentially, for all practical purposes, such a consent process would deprive U S WEST of access and use of its property in the conduct of its core commercial operations.

The Trial

In the last quarter of 1996 and the first quarter of 1997, U S WEST undertook a number of approaches to securing affirmative customer consent regarding CPNI. With the exception of inbound calling, U S WEST was unable to secure consent in any meaningful numbers. And, as discussed more fully below, while inbound calling produced fairly high levels of affirmative consents, it is not a model that can be employed across the totality of U S WEST's customer base.

The facts associated with the granting or denying of affirmative consent are known to U S WEST. The reasons for the granting/denying are derived from feedback from internal company service representatives (inbound calls) as well as vendor responses (outbound calls). The reasons were not quantitatively tracked.

Inbound Calling Affirmative Consents

From a total of 54,000 calls in to U S WEST's business offices, U S WEST service representatives were advised they should use their judgment in discussing CPNI and attempting to secure affirmative consents. Thus, permission was not asked on each call, and there undoubtedly were "customer friendly" pre-screenings going on with respect to the calls based on the rapport between the service representative and the caller. Such pre-screening conduct would be expected to result in a higher level of consents than if each caller were polled.

U S WEST secured 72% customer consents with the cost per transaction being $0.56, and the cost per positive response being $0.77.

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[35] With respect to customers who are not also competitors, the existence of "Account Representatives" who can often discern information necessary for marketing and sales activities without access to the specific record further reduces the internal business impact of these restrictions.

While the pre-selection opportunities might have increased the affirmative consents received, the percentage of consents received with respect to inbound calls, as opposed to outbound calls (discussed below), demonstrates the extent to which "engagement" of the caller is critical to securing affirmative consent to the access and use of CPNI. Furthermore, U S WEST receives inbound calls from only about 15% of its customers in any given year; and some of those customers are repeat callers. If U S WEST were relegated to using its internal business information only coextensively with the customer consents it received, an inbound oral consent process would be totally unsatisfactory to obtain the breadth of consents necessary for a successful business operation. Obviously, no business can successfully conduct business, let alone compete, by closing off access to 85% of its commercial business records.[36]

Outbound Calling

Approximately 1,250 customers were involved in the sampling, which included both residential and small business customers chosen at random, as well as customers previously identified as high value.[37] Five hundred seventy-eight (578) residential customers were contacted, with the remainder being small business customers. An average of four point eight (4.8) dialing attempts were made in order to reach a live respondent having authority to grant the necessary customer consent. The cost per contact was $5.89; the cost per positive response was $20.66.

From the overall sampling, on average 29% affirmatively consented to CPNI access and usage, with about an equal portion rejecting same. The most specific information available to U S WEST has to do with the calls to the residential market. Where contact was made, the party called was immediately advised that the call was not a telemarketing call. Despite this disclaimer, U S WEST experienced 221 "hang-ups."[38] Of those individuals remaining on the line to hear the substance of the message, 163 consented to CPNI access and use and 190 refused.

Two hundred seven (207) placed calls to residential subscribers were recorded as "unworkables" (representing no answer, wrong number or a language barrier).[39] **Thus, with**

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[36] This paragraph assumes that U S WEST would secure affirmative consents from all 15% of the inbound calls, leaving 85% of the records unassociated with consent. In fact, based on its trial results, U S WEST knows it would not secure consents on all inbound calls, thus rendering the records unassociated with consent greater than 85%.

[37] A sample size of 1,000 customers represents quite a large sample in terms of margin of error and a fairly standard sample size. For example, the CARAVAN telephone survey done in conjunction with Dr. Westin and the Pacific Telesis Survey used 1,000 adults. With respect to U S WEST's trial, the margin of error was less than 2%, which is similar to that reported by CARAVAN in its survey sampling.

[38] Four additional individuals asked to be put on a "Do-Not-Call" list.

[39] Apparently, in any telecommunications survey or calling campaign, the number of "no contacts" (or "unworkables") is usually very high in relation to the number of contacted individuals, and it is not uncommon for

respect to the residential market, the number of unworkables plus hang-ups represented a larger figure than the number of individuals with whom a full communication actually occurred.

Direct Mail

The direct mail aspect of the trial involved both customers chosen at random and targeted customers. The mailing was done *via* first class mail to 15,200 individuals (half residential customers and half small business customers), separate from any U S WEST billing and specifically requested an affirmative response. Some respondents were asked to mail back a form, while others were asked to call an 800 number. The mailings ranged from those which offered no incentive, to those which offered a $1.00 incentive to respond (prepaid calling card included in the mailing), to those that offered a $5.00 incentive upon receipt of response (prepaid calling card).

Response rates were low, regardless of the specific notification approach and the response media used. Positive responses ranged from 6% to 11% for residential customers to from 5% to 9% for small business customers. The $1.00 incentive did not result in response rates different from the no-incentive mailing. The $5.00 incentive affected segments differently, depressing response among business customers but having negligible effects among residential consumers. Calculated on the basis of per positive response, the cost of the direct mail approach was $29.32 per customer **plus** the incentive involved, if any.[40]

Significantly, from the perspective of a notification and opt-out model versus an affirmative consent model, of those individuals that called the 800 number (3%), only 1% called to provide affirmative consent. The other 2% called to "opt out" of the access and use of CPNI.[41]

Extrapolations of Costs Per Positive Consents

It is clear that securing affirmative consents is costly to a business. Overall, the cost per affirmative response can be expected to fall within a two-digit per response range (i.e., $20.66 for outbound calling to $29.32 for direct mail (plus possible additional costs associated with

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this category to contain numbers larger than those for other categories. The fact that "hang-ups" represented an even larger category than no answers was somewhat surprising to U S WEST and suggests that individuals are increasingly reluctant to be engaged by parties calling their homes, whether the call is to market a product or to transmit a non-marketing message.

[40] With a $1.00 incentive, the cost increased to $30.32; with a $5.00 incentive, the cost increased to $34.32.

[41] This 2% figure is less than the 3.6% figure now realized by small business customers who have actually received a notification, but above the .06% of the residential customers who have received no formal CPNI notification.

incentives). Assuming affirmative responses of 30% (which are quite high[42] and yet would still mean that access to 70% of U S WEST's internal records would be cut off), 50% and 70%,[43] the table below demonstrates the ranges of costs associated with securing affirmative consents from 14 million customers (the 14 million being used as an estimate of the entire customer base as represented by access line counts).

		Affirmative Response Percentages		
Cost Per Affirmative Response	**Type of Contact**	**30%**	**50%**	**70%**
$ 20.66	**Outbound calling**	**$ 86,772,000**	**$ 144,620,000**	**$ 202,468,000**
$ 29.32	**Direct mail - no incentive**	**$ 123,144,000**	**$ 205,240,000**	**$ 287,336,000**
$ 30.32	**Direct mail - $1.00 incentive**	**$ 127,344,000**	**$ 212,240,000**	**$ 297,136,000**
$ 34.32	**Direct mail - $5.00 incentive**	**$ 144,144,000**	**$ 240,240,000**	**$ 336,336,000**

The costs are indisputably very significant. In light of the fact that U S WEST's affirmative consent trial failed to produce any affirmative consent rate above 29%, the costs identified above are estimates. These estimates reflect lower costs than would be expected to be incurred; to reach an affirmative response level in the 30 to 70% range would require the incurrence of greater costs than are reflected in the cost per affirmative response reflected above. This is because there would be a need for repeated calls to households and repeated mailings. And, even after having expended such costs, under an affirmative consent model, U S WEST would still be deprived access to between 30 and 70% of its internal corporate records. Were such costs imposed by a regulatory authority, it seems clear that any rational business would become more particular about the customers from whom it seeks consent and how that information is used.[44]

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[42] It bears repeating that U S WEST achieved greater than a 30% consent rate only with respect to inbound calling, the figures of which are not represented on the chart because of the inherent lack of suitability for such a model to secure consents across the customer base. Of the other consent approaches, U S WEST came close to securing 30% consents only with respect to outbound calling.

[43] These figures are provided only to indicate the magnitude of the potential costs involved. U S WEST does not believe it could secure such consent levels through any consent model short of inbound calling.

[44] Compare Denver Area Educational Telecommunications Consortium, Inc., et al., v FCC, 116 S. Ct. 2374, 2391 (1996) (rejecting an "opt-in" approach to information access in part due to the added costs and burdens that such requirements would impose on a cable system operator). It seems fairly basic that a company would direct its

U S WEST's Affirmative Customer Consent Trials Support Existing Record Evidence That Such Consents Would Be Impossible To Secure; That The Vast Majority of Consumers Lack Serious Interest Or Concern About Internal CPNI Use; And That Those That Affirmatively Object To Such Use Do So Primarily To Avoid Future Marketing Contacts

General Observations

If one begins with the direct mail response and moves through the outbound calling to the inbound calling trials, a number of conclusions can be drawn. The direct mail trial confirms that only a very few customers will take affirmative action to respond to such a mailing, even when an incentive is involved. The lack of customer response also suggests that the substance of the communication is not something that is of burning criticality to a majority of the readers. That is, U S WEST customers are not particularly concerned about the issue of CPNI access and use in the abstract.

When the issue of CPNI is raised "in the face" of the customer, responses are very much affected by the manner in which the communication is initiated, i.e., a positive response when the customer initiates the action that results in the communication and the communication is relevant and timely to the consumer; no response or an unfavorable response when the customer's solitude is intruded upon. And, even these latter unfavorable responses were tremendously influenced by the individual's desire "not to be marketed to." Few individuals expressed any opinion on the internal use of CPNI for normal business purposes (such as product planning, design or development), and those that did expressed a concern that such product work might come back to them in the form of a marketing contact if they did not deny consent to access or use their CPNI. In essence, those customers that refused to allow U S WEST to access or use the CPNI relating to them utilized a hammer to kill a flea because that was the context in which they were being asked to respond.

Oral Communications

With respect to the oral communications, it is clear that individuals provided affirmative consent with respect to inbound calling to a substantially greater degree than in an outbound calling environment. However, given the fact that there was a certain "pre-screening" that was done by the service representatives on the inbound calling, it is reasonable to assume that – without such pre-screening – refusals to grant affirmative consent would have been higher.

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efforts to expending costs where access to the record would provide the greatest return. This conduct might well result in certain individuals being offered fewer choices and fewer communications.

The oral consent aspect of the trial demonstrates a number of other things, as well, all consistent with the existing record.

First, individual engagement is critical to a communication about CPNI, especially when there are potential legal consequences associated with the communication (i.e., a refusal of consent renders the information out of bounds with respect to access, use and disclosure).[45] As U S WEST has advised, residential telecommunications customers do not have telecommunications purchases uppermost in their minds.[46] Combining this information with the knowledge that privacy repeatedly shows up on public opinion surveys as a second-tier issue, strongly suggests that attempts to discuss "privacy issues" in a vacuum or where the individual is not currently engaged results in many customers responding reactively and negatively because they fail to see the benefits associated with information use and know only that they do not want the information used to contact them.

Second, the CPNI affirmative consent communication being conveyed does not lend itself to easy oral articulation or explanation between a company employee and a customer. The message can be confusing and cannot really do justice to the benefits associated with the use of the information in the amount of time that is reasonable to expect an individual to remain on the line. Furthermore, the communication might suggest that there is something inappropriate about the use of the information.[47] And, in any given communication where an individual is given *carte blanche* authority to restrict a business' access and use of its commercial information without regard to the consequences to the business, an individual's desire to "control information" about them – fueled by the ongoing press coverage over the loss of control of personal information – could well cause the individual to assert such control.

Third, to the extent that a business must secure affirmative consent before it is entitled to access, use or disclose its business information internally, the fact that "no answers" and "hang-ups" occur is a critical variable to the success of any consent campaign. While a public polling survey is not negatively affected when called individuals either do not answer or hang-up (because they can simply increase the pool called to get to the necessary statistically valid

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[45] U S WEST has previously advised the Commission of the problem of "notices" in the absence of customer engagement. Comments of USWC, CC Docket No. 90-623, filed Mar. 8, 1991 at 95-96. As is obvious from the CPNI affirmative consent trial results, the significance of "engagement" is clear from the customer consent levels U S WEST received when customers initiated calls to U S WEST as opposed to those consents secured from an outbound telemarketing campaign. An individual's lack of engagement is something manageable where the *status quo* is permitted to continue unless and until they are engaged. It is quite another thing when the individual's lack of engagement results in a change in the *status quo*, or – in this instance – the restriction of use of U S WEST's internal commercial records.

[46] U S WEST Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 2 and n.3 (referencing USWC's 1991 Comments, CC Docket No. 90-623 at 82 and Appendix B at 6-7).

[47] See, e.g., Comments of Pacific Telesis Group, CC Docket No. 96-115, filed June 11, 1996 at 9.

numbers), a requirement that affirmative consent must be gotten before a specific type of information can be accessed or used renders the large class of "no answers/hang-ups" a barrier to use of internal commercial information.[48]

Fourth, it is clear that a substantial number of individuals are interested in decreasing the amount of marketing information they receive from commercial enterprises. It is clear that U S WEST's communication with its customers on a matter of legal significance was "tainted" by what is clearly a more general "telemarketing aversion." U S WEST has described this aversion to the Commission in filings in this proceeding.[49] It is also consistent with Commission observations about the "nuisance" nature of such calls from the perspective of certain individuals.[50] The significance of this aversion to the trial experience, however, is that individuals restrict (or refuse to consent to) the use of CPNI not because they are concerned about routine business or commercial uses of CPNI or even of the use of such information for communications with willing recipients of information, but because they, themselves, do not want to be marketed to in the future.[51] The irony of the customer response associated with the telemarketing aversion is that the greater the sharing and use of internal information, the better able a business is to match a customer with a potentially desired product (i.e., targeting), reducing the levels of shot-gun calling and telemarketing that occurs.

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[48] Even if one were to argue that this category of callers was likely to have split about 50-50 on the issue of affirmative consent in an outbound calling environment, there would still be the other problems associated with this method of securing consent.

[49] As U S WEST has advised the Commission on prior occasions, the CPNI notice that U S WEST sends out to its business customers routinely resulted in large numbers of requests for CPNI restrictions from our small business customers. When further inquiry was made of them, it appeared that these customers believed that their restriction of CPNI would result in their being taken off marketing lists – a consequence that was never communicated to them as being a possibility and one that was, in fact, incorrect. As a result of this phenomenon, U S WEST changed its CPNI notice to include a disclaimer that CPNI restrictions would not result in the entity requesting the restriction being put on "do not market" lists. To accommodate this latter set of customer interests, U S WEST provided a separate number for individuals to call. Similarly, when U S WEST sent out the Billing Name and Address ("BNA") notices required by the Commission, the overwhelming majority of calls received by U S WEST to restrict BNA were to ensure that the individual was not on marketing lists. Again, when it was explained to the individual that restriction of BNA had nothing to do with marketing lists, individuals changed their initial position (i.e., restriction) in the vast majority of the cases. See U S WEST's Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 18, n.47; Comments of USWC, CC Docket Nos. 90-623 and 92-256, filed Apr. 11, 1994 at 23-24 n.46.

[50] In the Matter of Policies and Rules Concerning Local Exchange Carrier Validation and Billing Information for Joint Use Calling Cards, Petitions for Reconsideration of US West Communications, Inc., Third Order on Reconsideration, 11 FCC Rcd. 6835, 6849 ¶ 23 (1996).

[51] Indeed, on more than one occasion, the example of what they did not want was to be called by U S WEST similarly to the way they were called by interexchange carriers.

Fifth, the combination of the telemarketing aversion discussed above and a company's need to secure affirmative consent produces a less-than-desirable context for communication and has the potential to adversely affect the goodwill between the company and the customer. While a business might be willing to take the risk that an existing customer might consider a telemarketing call an intrusion,[52] the desire to maintain a solid relationship generally and the existence of internal "Do-Not-Call Lists" allows for a call that the customer wishes had not been made or desires not to have repeated to be accommodated in a commercially professional manner.[53] However, a call that a customer considers to be an intrusion is predictably unlikely to result in the individual affirmatively consenting to the use of CPNI because it is precisely the conduct that those customers "restricting their CPNI" want to avoid.[54] This situation will only be exacerbated to the extent that any individual customer is supported by more than one carrier and receives multiple CPNI affirmative consent calls.

Sixth, securing oral affirmative consents would be labor intensive and expensive. The number of customers is a material factor that must be considered in addressing the matter of affirmative **oral** consents. U S WEST has between 10 and 11 million **residential** billed telephone numbers ("BTN").[55] While about 15% of that base could be expected to call in during the course of the year, an additional oral consent initiative would have to be conducted on an outbound basis to reach the remaining customer base.

When outbound calling contact with a household is made, there is an added burden of making sure that the person being communicated with is the customer of record with the

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[52] Indeed, customers who had previously asked to be put on U S WEST's "Do-Not-Disturb List," established not only as a part of good business practice but to conform to the FCC's TCPA rules (47 C.F.R. § 64.1200(e)(2)(vi)), would certainly be aggravated by a telephone call from the company and might not be willing to engage in enough conversation to establish the substantive (i.e., non-marketing) nature of the proposed communication.

[53] Undoubtedly, this is the reason the Commission previously found that marketing calls by businesses to individuals where there is an existing business relationship raise few privacy concerns; and, whatever concerns there are can be addressed professionally through the maintenance of "Do-Not-Call lists." In the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991, Report and Order, 7 FCC Rcd. 8752, 8770 ¶ 34 (1992). Despite the fact that there is clearly a hard core "no telemarketing" constituency in the United States, it has yet to become the constitutional, legislative or regulatory policy in this country that commercial communications do not occur unless invited. It remains the position that commercial communications occur unless asked not to occur.

[54] In this respect the "CPNI consent" call is similar to a company calling an individual to ask that individual whether they want to be on a "Please-Call list" or a "Do-Not-Call list." No commercial transaction is being engaged in. The call is an attempt to categorize individuals prior to the engagement in desired speech. Such an approach seems at odds with First Amendment values which favor the free flow of information absent a request to be relieved of that information flow or communication.

[55] The number of actual customers may vary somewhat from this figure. To the extent that a single customer has multiple BTNs (multiple lines into the home billed to a single responsible party), the number of customers will be less than the number of BTNs. However, to the extent that multiple lines into a home are billed to different responsible parties, there may be about the same number of customers as BTNs.

requisite authority to provide the appropriate consent.[56] Often the customer of record is simply not able to be reached easily or at all. Additionally, to the extent that a household has more than one BTN, the existence of multiple BTNs might result in more than one request for consent being made to the same individual (where the BTNs are not cross-referenced on the Customer Service Records) or there may need to be multiple calls made to the same residence requesting consent from different individuals in the household. This is obviously a fact situation ripe for customer irritation and annoyance – states of being that could well adversely affect the granting of consent in the first instance.

An Affirmative Consent Mandate Would Be Contrary To The Public Interest And Would Materially Impact Those Customers Who Want Quality Products And Communications About Them

Affirmative consent requirements are barriers to commercial conduct and speech. They operate to depress spontaneity and are barriers to "easy to do business with" commercial transactions.

From a constitutional and policy perspective, a **written** consent requirement is an obvious barrier to commerce and communication. Congress has never imposed such a requirement on any company with respect to internal use of commercial information.[57] From a policy perspective, in an age of converging computer technology and information technology, the notion of requiring written documents from millions of individuals in order to do business is anachronistic. Most commercial transactions between business enterprises and individuals do not involve written documentation. And, most particularly, the telecommunications industry has a tradition of engaging in transactions telephonically, totally eschewing "written documentation" commercial practices. A requirement that customer consent be secured in writing would be a giant step backward in a commercial environment that is becoming increasingly paperless and, in that regard, becoming more and more like the traditional telecommunications industry.

Affirmative oral consents are also barriers to commerce and speech, not only with customers currently served by U S WEST business, but with future customers, as well. The CPNI in U S WEST's possession educates the company on future product development and design that might be offered to individuals that want their CPNI used or who are not currently

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[56] Compare In the Matter of Implementation of the Subscriber Carrier Selection Changes Provisions of the Telecommunications Act of 1996, Policies and Rules Concerning Unauthorized Changes of Consumers' Long Distance Carriers, CC Docket No. 94-129, Further Notice of Proposed Rule Making and Memorandum Opinion and Order on Reconsideration, FCC 97-248, rel. July 15, 1997, n.44 (noting that the telephone subscriber is the only authorized entity to effectuate a PIC change).

[57] Other than the FCC's CI III/ONA CPNI rules, no business in the United States is subject to a rule that they secure affirmative customer approval before they can use their own business information.

U S WEST customers. The record evidence in this proceeding demonstrates that substantial numbers of individuals are interested in communicating with existing suppliers.[58] And, CPNI use would be consistent with the Commission's prior acknowledgment that internal CPNI use permits carriers "to engage in . . . joint planning and response to customer needs, that many customers apparently desire" and that – barring artificial regulatory requirements – carriers can "efficiently provide."[59] A carrier's inability to secure an existing customer's affirmative consent to access or use CPNI should not compromise that lawful business initiative with respect to existing and future customers.

By way of example, U S WEST has previously advised the Commission that in 1996 it conducted a statistically valid survey that demonstrated that 70% of the customers surveyed supported certain types of cable/telephony offerings, with the interest rating rising to 83% within certain customer segments.[60] Those customers that indicated interest in such combined offerings might not actually know or appreciate, however, that the way in which such integrated offerings are brought to market is through the use of internal business intelligence (captured in business records) that allows for educated business decisions based on trending of purchase patterns, either by product or geographically. If those same customers were asked whether they consented to the use of individually identifiable information about them to craft such integrated offerings and to communicate with them about it, a substantial number might say "no." Does that fact mean that the remaining customers – still interested in the cable/telephony offering – should be deprived of the best offering based on the best internal business information? It certainly does not.

Conclusion

All told, U S WEST's affirmative consent trial confirms the advocacy of U S WEST and others before the Commission. As a general matter, affirmative consents would be expensive to attempt to secure and not largely forthcoming. The trial also confirms prior Commission conclusions on the "privacy" concerns that individuals have within an existing business relationship (very little, as demonstrated by the response to the direct mail piece); and demonstrates that there is an abiding (and perhaps increasing) number of individuals that do not want to be contacted telephonically, even when there exists an ongoing business relationship. The latter situation, however, should not be one that operates to deprive a business of internal use

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[58] See note 25, supra.

[59] BOC CPE Relief Order, 6 FCC Rcd. 143, 148 n.86 (1987). Furthermore, the Commission has observed that "[t]o the extent that the BOCs use CPNI to identify certain customers whose telecommunications needs are not being met effectively and to market an appropriate package of enhanced and basic services to customers, customers would be benefited." Phase II Recon. Order, 3 FCC Rcd. 1150, 1162-63 ¶ 97 (1988).

[60] U S WEST Opening Comments, CC Docket No. 96-115, filed June 11, 1996 at 6.

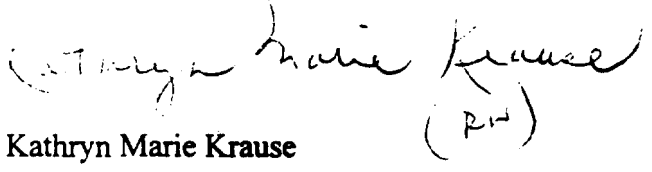
of its business information for lawful business activities that will inure to the benefit of those that do want to communicate with the business in question.

While one could take the U S WEST trial and attempt to argue that the results demonstrate that U S WEST customers do not want CPNI being used "across buckets" or for product design, development or future marketing, it would be a mistake to draw such a conclusion. Indeed, the response to the written communication strongly suggests just the contrary. It suggests – consistent with advocacy on the record – that customers will not respond at all, affirmatively or negatively, to a company's communication about CPNI. Given the existing statistical information on customers' general acceptance of CPNI uses and customers' basic trust of their local telecommunications carrier, the clear implication from the lack of response communicated to U S WEST is that customers do not care about such internal use (any more than customers care about the internal use of cable subscriber viewing information, another type of internal business record about which customers receive communications).[61] It would be an arbitrary and capricious action to conclude that customer silence and inaction represents an intentional denial to U S WEST to access or use CPNI within the corporate enterprise.

While U S WEST understands that Congress, through its adoption of Section 222, sought to repose in individuals certain rights associated with information that relates to those customers which is in the possession of carriers, the protection of customers' interests in confidentiality does not require consumers to be polled by businesses with whom they have a relationship with respect to whether or not the business can use the record information internally. Nor should consumer interests suffer the predictable degradation of quality services and marketing efforts that would result overall should affirmative customer consents be required before a business can internally use its commercial information.

We appreciate your kind consideration of the facts and arguments contained in this document.

Sincerely,



Kathryn Marie Krause

[61] 47 U.S.C. § 551.

APPENDIX A

The cost of entry

Do telcos need a data warehouse to play in today's market?

JOAN ENGEBRETSON, Features Editor

Periodically, when a new technology generates good results for one or two local or long-distance carriers, suddenly, at telcos nationwide, management's question becomes not "Why should we do this?" but "Why aren't we doing this?"

A few years ago, this happened with residential broadband; more recently, data warehousing has become hot. Whatever the technology, there are certain similarities in the implementation process. Trials are quickly launched, and the professional conference industry thrives. After gaining some experience with the new technology, carriers—upon seeing clear benefits—will sometimes assimilate it into their operations. Other times, the carriers are disappointed with the results, dropping a new technology en masse, in much the same way they initially embraced it.

Data warehousing, by and large, is still in the honeymoon period. By integrating information from multiple legacy operational systems and making that information easier to access and analyze, the technology is aimed at improving a company's decision-making capabilities (Table 1). This can be especially valuable for marketing executives because a wealth of information can be obtained about a company's existing or potential customers, including those customers most likely to switch to a different carrier and the best prospects for new services.

How will data warehousing fare in the long term? Although a misguided implementation can jeopardize results, the technology has generated some significant success stories—and in an increasingly competitive environment, carriers are generally viewing it as a key strategic tool.

Warehouse blueprints

Although "everyone's doing it" may serve as a justification for data warehousing today, its early adopters often were seeking to solve very specific strategic problems.

"We didn't set out to build a data warehouse. We set out to build a relationship marketing system," says Chip Grim, director of mass markets sales and marketing systems development for MCI. "We dealt with phone numbers, not individuals. Marketing wanted to get more specific about individual needs."

MCI started the process of building its warehouse in late 1993, says Grim. Using massively parallel processing, the system now has 120 nodes and contains 7.5 terabytes of information, including 2.5 terabytes of raw data. "We do things to protect and mirror our data," he says, explaining the size differential.

Contained in the database are records on households nationwide, not just MCI customers. By obtaining more information about the prospects for its services, the company has improved the efficiency of its customer acquisition methods.

"Our revenue per customer has gone up, and our zero usage sales [customers who sign up for a service they do not use] has gone down," says Grim.

Bell Atlantic was also an early player in data warehousing. Hoping to improve stagnant revenues, the carrier started building its data warehouse in 1993, says Bob Ingalls, vice president of consumer marketing. "We believe the revenue growth we've seen over the last couple of years is somewhat a function of this growth and development," says Ingalls. "We've gotten smarter in targeting our customers. We're also benefiting from customer growth."

Carriers have learned many valuable lessons in building their data warehouses—lessons about system architecture, about the planning process and about the data

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TABLE 1
FACTORS DRIVING DATA WAREHOUSING DEMAND

	All carriers	Large LEC	Small LEC	IXC	Cellular carrier	Cable TV
Creating customer profiles to assess product churn or bypass	2.7	2.8	2.8	2.3	2.7	3.0
Identifying ways to optimize products and services	2.6	2.5	2.8	2.8	2.3	3.0
Boosting speed to market for new services/products	2.5	2.3	2.5	2.5	2.3	3.0
Delivering decision support reports faster to end users	2.5	2.5	2.0	2.5	2.7	3.0
Providing better customer service	2.5	2.8	2.3	2.5	2.7	3.0
Producing direct marketing lead lists for campaigns	2.3	2.5	2.3	1.8	2.0	3.0
Finding network infrastructure investment opportunities	1.8	1.3	1.5	2.3	1.3	2.0
Reducing backlog of decision support	1.8	1.5	1.5	1.5	1.7	2.5
Replacing legacy data warehouse systems custom coding	1.4	1.2	1.3	1.3	1.7	1.5

Rating
3 Critical **2** Important, but not critical **1** Not important, or of minor importance

Source: Technology Research Unlimited

itself (see sidebar on page 23).

Initially, it was common for telcos to have separate data warehouses for different departments, and those warehouses were sometimes capable of providing different answers to the same question, depending on how data was summarized and how often it was updated.

BellSouth is one carrier that initially established several separate initiatives. Robert Bennett, senior director of customer information, says this resulted from a lack of standards among data warehousing vendors. And because few information technology personnel were experienced in data warehousing, they were encouraged to use any vendor's solution with which they were comfortable.

BellSouth and other carriers now are adopting a different approach in which a large central data warehouse feeds several smaller warehouses, known as data marts (Figure 1). Data marts typically support a few hundred users, providing consistent data companywide, while allowing departments to tailor summaries and interfaces.

"Our vision is to build one corporate warehouse at corporate marketing and have data marts feed individual lines of business," says Bennett.

The advantage for corporate marketing will be an integrated view of the company. "The thrust behind integration is to better create multiproduct offers and target to the right segments," says Bennett.

Currently, companies must obtain a release from customers to use customer proprietary network information—such as billing revenue and product usage—from multiple lines of business such as cellular and wireline, says Bennett. The company plans to launch a program to obtain those releases. With such information, and by using the integrated data warehouse design, the company will be in a better position to determine a customer's overall value across multiple lines of business, which will further help in target marketing.

Data marts solved a different problem for U S West. Initially, too many people had the ability to conduct queries against the central data warehouse, which created congestion at peak hours, says Gloria Farler, executive director of market intelligence and decision support. By establishing data marts, the company has significantly improved response time for users.

MCI also relies heavily on data marts fed from a central data warehouse. Often, data marts are implemented for 90 days to support a particular campaign, says Grim. For example, information about affluent customers with personal computers might be loaded into a data mart to support a promotion to sell Internet access.

"If the warehouse goes down, the business can still function," says Grim. "And if one mart goes down, the others are still OK."

MCI is one of several carriers that are using an operational data store. The operational data store, which offers high-performance processing, receives near real-time feeds from the operational systems and may, in turn, feed the data warehouse. Answers to queries generated against the operational data store are more timely than those generated against the data warehouse (Figure 2). Unlike the data warehouse, however, the operational data store does not contain historical information.

MCI uses its operational data store to provide the most current information to employees who have direct customer contact. Before an MCI telemarketer makes a call to a lead pulled from a campaign management mart, that lead is compared with the operational data store to include any changes that may have occurred since the data left the warehouse.

The danger of any approach that involves a centralized data warehouse for an entire organization is that participants can spend too much time in the planning phase. Complicating matters is the fact that users have difficulty defining their needs until they have some experience using a system.

The ideal methodology for building a data warehouse is different from the waterfall approach typically used

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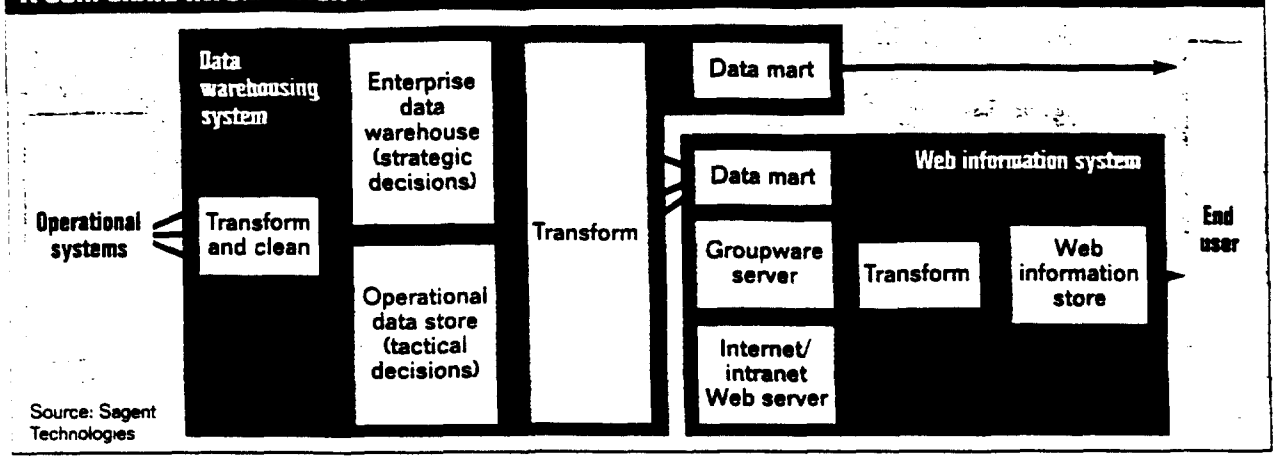
FIGURE 1
A CORPORATE INFORMATION SYSTEM



Source: Sagent Technologies

by information systems designers, says Mike Blackmon, manager of wholesale services test and design for WorldCom. Blackmon is currently in the process of delivering the first phase of WorldCom's data warehouse.

"It's important to throw as much as you can at users and let them start building requirements on the fly, then work on performance and optimization issues on the second and third iteration," he says.

Close coordination between information systems and marketing personnel is crucial to an effective implementation. Participants will know they have achieved success when the number of users, the complexity of the analysis and the amount of data all increase, says Ben Barnes, general manager of global business intelligence for IBM.

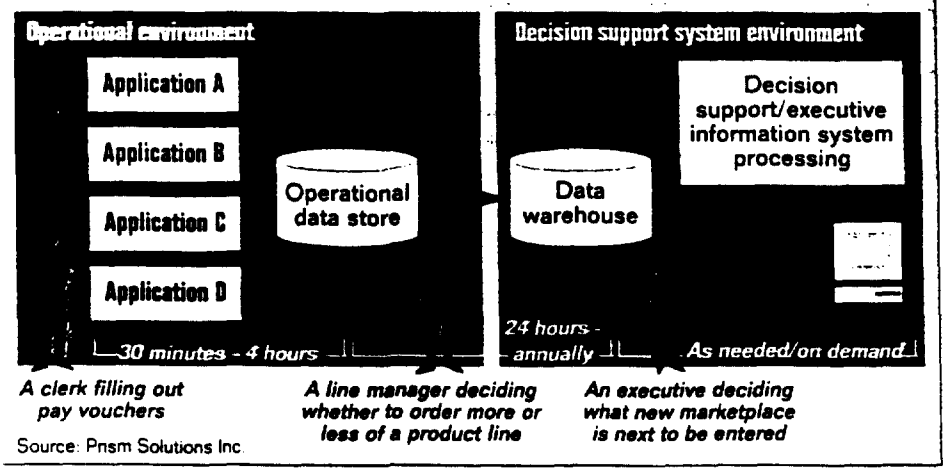
Not surprisingly, some companies have had to expand the size of their data warehouses. Bell Atlantic initially planned for a 125 Gbyte warehouse but now has passed a terabyte, says Bruce Radloff, director of market development systems. "As [internal] customers started using the data, they had more things they wanted to do with it," says Radloff.

Data warehouses lend themselves to unplanned growth, says Barnes.

"Decision support systems are by nature ad hoc," he adds. "There is no finite plan as with a billing system."

Database management systems are available from Oracle, Sybase, Informix and others. Companies offering data marts include Informatica, Sagent and Information Builders. IBM claims to offer a completely integrated solution.

FIGURE 2
DATA WAREHOUSE/OPERATIONAL DATA STORE UPDATES



Source: Prism Solutions Inc.

The miner leagues

Some types of analysis for which a data warehouse is used—such as finding out how many people in a certain ZIP code who pay their bills promptly have caller ID—do not require a warehouse. The alternative, however, typically requires much more work on the part of a company's information technology personnel. This, in turn, reduces the timeliness with which the analysis can be obtained.

Data warehousing enables marketing and other nontechnical staff to conduct their own queries on-line. WorldCom's Blackmon describes this capability, known as on-line analytical processing (OLAP), as "giving users the ability to create their own reports on the fly." OLAP tools are offered by MicroStrategy, Acxiom, Applix, Cognos and others.

The next step in data analysis, which some carriers already have taken, is data mining. Unlike OLAP, which requires users to make decisions about which criteria to analyze and to structure their own queries, data mining uses statistical techniques such as decision trees and neural scoring to locate patterns in the data that users might not have thought to look for.

Barnes cites the example of a Bell regional holding company that discovered, through data mining, that certain customers had very high rates of local calls between 3 and 5:30 p.m. By supplementing this data with household-level demographic information, the carrier realized that many of these homes had teenage children.

Using the demographic data, the carrier divided the group in two. The more affluent households received an offer to purchase a second telephone line, while the less affluent group was targeted with call waiting.

Carriers that use data mining generally keep it in the hands of a small group of specialists who often feed the results to the marketing department as prospect lists, ranked in order of probability of exhibiting a certain behavior, such as purchasing a certain service. Although some data mining tools may be as easy to use as OLAP tools, not everyone can interpret the results.

EDS has been reminded of this in marketing a system it has developed that uses neural clustering to create customer profiles. "The only command issued is 'form yourself,'" says Jed Zaitz, EDS' management consultant. "But to understand what you've got demands a level of knowledge beyond what [many users] have."

U S West is one carrier that has a group of employees focused on mining and modeling.

"We're not only looking at characteristics, but behavior over time," says U S West's Farler, adding that to build a good predictive model requires at least a year's worth of data. The market intelligence group began by developing a model to predict transition—the likelihood that a customer will change carriers or increase or decrease spending with the company. The next project will be to predict the next product a customer is likely to acquire, which will be followed by a campaign management project.

Some carriers turn to outside consulting firms for customer and prospect profiling and database modeling. Competitive local exchange carrier ICG Communications used consultants to develop a model to predict the number of lines a company would use, says Jay LaPointe, director of marketing services. Components of the model included standard industry classification codes, number of employees and whether a location was a sales branch. ICG has used this information to determine where to focus marketing and sales and where to build out its networks, says LaPointe.

Data mining also lends itself to churn management (see sidebar on page 24).

Data sources

In addition to data from billing and other legacy systems, some carriers—including Bell Atlantic, Ameritech and GTE—have loaded research from customer surveys into their warehouses. Some carriers are also beginning to focus on call detail records and other usage information.

"We've done a lot of thinking about what is a product," says Carter Forringer, GTE's director of marketing information management. A company might use call patterns to generate an idea for a product aimed at someone who makes lots of very short phone calls, says Forringer.

Although many carriers are focusing on marketing applications, particularly programs to increase customer contact, an alternative strategy is to focus on employing usage information to manage the network more efficiently and to become the least-cost producer, says David Holcombe, master consultant for Lander Consulting.

"Usage data allows you to see what products and services are used to what extent in what areas," says Holcombe, who consults with carriers on their warehouses. "If you're considering enhancing a switch, you want the most information possible."

Ameritech is beginning to base its infrastructure decisions on usage data contained in its data warehouse, says James Kinzel, chief architect for marketing decision support for the carrier. Another payoff occurred re-

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The transformers

Before you can "slice and dice"—as marketers like to describe their on-line analytical processing capabilities—you have to "cleanse." Carriers generally agree that the most significant task in building a data warehouse involves the data itself—specifically, moving it from numerous legacy systems into the new system and ensuring that the data is consistent.

"Extraction, transformation, cleansing and loading represents about 70% of the effort involved in building a data warehouse," says John Ladley, program director of applications delivery and strategic services for Meta Group.

Typically, system designers create a data transformation layer to convert information from billing, provisioning and other systems into a consistent format and then feed it into the data warehouse. Designers also must create records (known as metadata) of how information fields are generated. Data about multiple cell phones assigned to the same household, for example, might be combined into a single account record. Users need easy access to this explanatory material.

Ensuring that individual customer records have the correct information in each field is another concern. Ann Marlow, business analyst and technology architect for Ameritech Cellular and Paging, says most legacy systems lack free-form data entry fields to capture remarks pertaining to a customer's account. "Users who needed to capture facts about a particular situation or customer interaction entered in the data that they recognized was important just about anywhere it would fit," says Marlow. "As a result, a database field like 'customer address' may not always contain mailing address data about a customer."

Solving problems like these involves creating thousands of business rules, which reside in the transformation layer. A business rule, for example, might recognize multiple misspellings of Albuquerque, converting them all to a common format.

Ameritech Cellular was able to reduce the complexity of its data cleansing effort by using a customized version of a product from Trillium Software that includes many standard business rules, says Marlow. Data transformation and cleansing software is also available from several other companies, including Prism Technologies, Group One, Apertus and Smart Corp.—*JE*