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Technology and Communication in a Federal Court: The Ninth Circuit

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Communication among judges is at the heart of "the immediate relations judges have with colleagues on the bench." Continuing communication is crucial for the judicial collegiality assumed to exist in small courts, the possibility of which is questioned in very large courts. Without such collegiality, rising caseloads and increasing numbers of judges "strain working relationships" and "threaten the stability and continuity of law."

This article addresses the effects of technology on communication among the judges of the largest federal appellate court, the United States Court of Appeals for the Ninth Circuit. It examines how judges communicate with each other in the course of reaching decisions in cases.

Courts increasingly rely on technologically advanced commu-
cation devices to assist in the transmission of opinions between locations. Such technology includes facsimile transmission, communication between word processors, and fully integrated electronic mail/word processing systems. The Ninth Circuit, like other courts, uses the latter to send "notices of concurrence or dissent to opinions, comments and suggestions concerning proposed opinions, action on motions, petitions and other procedural matters and instructions to the clerk's office."4

Learning about a court such as the Ninth Circuit is important because most people have a picture of appellate courts based on the Supreme Court. This stereotype depicts all the justices with chambers in the same building and meeting frequently as a collective body. However, although the judges work in the same building, only occasionally do they "run down the hall" to discuss a jurisprudential point with a colleague.5 Lower federal appellate courts convene as en banc courts from time to time, though rotating three-judge panels decide most cases. Also, with the exception of the D.C. Circuit, judges do not maintain chambers in the same city.

The Ninth Circuit is a representative appellate court in terms of its operating procedures. However, it is not so in terms of its geographic size, caseload, and number of judges. Both its representativeness and special characteristics make it worthy of study as we seek a broader understanding of the judicial process in appellate courts. For such an understanding, we need to learn both about commonalties across courts and their idiosyncrasies. As Philip Cooper has observed: "One or more circuits within the system of federal circuit courts of appeals are sufficiently unlike other system subunits so that individual organization analysis is needed in order to understand

4. Blend, Greacen, McCullouch & Schrinel, Use of Electronic Mail in Appellate Courts, 10 St. Cr. J. 7 (1986) [hereinafter Blend]. The courts make other uses of technology. They not only utilize LEXIS and WESTLAW for case searches but also avail themselves of computers to help manage case flow, inventory cases, and construct calendars.

5. Chief Judge Patricia Wald of the D.C. Circuit, where all the judges are in the same building, says that one's colleagues "are so busy that you don't walk down the hall and start talking . . . about how you are going to word this sentence or elaborate a point." New D.C. Circuit Chief Judge Wald Interviewed, 18 The Third Branch 1, 11 (#7 1986). The same statement is true at the Supreme Court level, where Justice Powell has remarked that correspondence and memoranda are the principal modes of communication between the justices' offices. See Powell, What the Justices are Saying . . ., 62 A.B.A. J. 1454 (1976); see also H.W. Perry, Jr., Deciding to Decide in the U.S. Supreme Court: Bargaining, Accommodation, and Roses, Paper presented to American Political Science Association, Aug. 1986, at 9 (Because of press of time, "the proper way to communicate among justices is through writing." Id.).
their operations along with the system-wide perspective." The Ninth Circuit is "sufficiently unlike" other United States Courts of Appeals to legitimize a study focusing on it alone.

Another reason for examining the Ninth Circuit is that it has been studied before. Consequently, there is opportunity to examine change. One can see differences between the views of the court's more senior members who served when the court had only thirteen active-duty judges, and the perceptions of judges who have joined it as it expanded first to twenty-three and then to twenty-eight judges. The study is not longitudinal in the sense of being a continuous look at change in the court. It is rather a reexamination after a period of almost ten years. The reexamination provides a more complete picture of change than one could obtain retrospectively from the single point of 1986. Such a single-point study would likely mask significant developments such as the shift from the telephone to electronic mail.

Most striking in the interviews with judges and staff is the extent to which judges who had earlier favored the telephone over written communication (and the mails in particular) now prefer the electronic mail system installed by the court in the early 1980's. Less surprising was that the judges previously favoring the written mode also prefer the electronic mail system.

Much of the information for the present study comes from both the Ninth Circuit's judges and the court's staff. Twenty-seven of the court's twenty-eight active-duty appellate judges, two senior judges, and several staff members were interviewed from late March through late June 1986. Interviews lasted from thirty minutes to two hours. Ten of these judges had previously been interviewed in 1977. An effort was made to tap their perspective on changes that had occurred since the prior study.

I. THE NINTH CIRCUIT

Before discussing the means of communication that judges use

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7. See Wasby, Communication Within the Ninth Circuit Court of Appeals: The View from the Bench, 8 Golden Gate U.L. Rev. 1 (1977). In this article, the patterns of communication at each stage of the process by which a case was considered were examined. For a reexamination of those patterns, also based on the 1986 interviews, see Wasby, Communication in the Ninth Circuit: A Concern for Collegiality, 11 U. Puget Sound L. Rev. 13 (1988).
and their reactions to those means, with particular attention to the telephone and electronic mail systems, it is important to first examine the basic characteristics of the Ninth Circuit, and sketch the basic patterns of case-processing in that court.

The United States Court of Appeals for the Ninth Circuit has a number of characteristics that significantly affect intra-court communication. They include a heavy caseload; a large number of judges of differing ideological views; and wide geographic domain. These characteristics are said to affect communication and collegiality negatively. However, the negative effects should be treated as problematic. As one judge says about the court, although the country has never had an appellate court that large, "I'm morally certain there is no problem at all [with a court of that size] unless we create one." If nine judges were posited as the ideal number, you assume a problem with anything larger — "you don't have to bother with the facts."  

The Ninth Circuit's caseload is over 5,000 cases each year, accounting for over twenty percent of all federal appeals. Many judges consider this caseload "burdensome" and "unrelenting." It was the need to process this caseload that led the court to adopt procedural innovations and other measures to increase productivity. The innovations include having judges sit for five-day rather than four-day calendars, having calendars of heavier weight, adopting a case screening program for simpler cases, and reducing the number of district judges sitting with the court.  

The Ninth Circuit has almost twice as many active-duty judges (twenty-eight) as the next largest federal appellate court. The court has grown from thirteen judgeships (plus senior judges) ten years ago to its present complement. These judges have diverse backgrounds, both occupationally and ideologically. The expansion is a result of fifteen appointments made by President Carter and seven by President Reagan by mid-1986.

Four-fifths of the judges say that the number of judges has affected communication; most of them say the increase in judges also had such an effect. Effects include "thinner" communication among any particular pairs or sets of judges; greater difficulty in keeping up

8. Material which appears in quotations without attribution is drawn from interviews with the judges, which were conducted on the basis that comments would not be attributed to judges by name. Although the male pronoun will be avoided where possible, "he" and "his" will be used throughout in order not to treat the four women members of the court separately. Comments from more than one interview may be combined in the same sentence.

with colleagues' opinions (a result of caseload); and decreased familiarity with other judges resulting from the increase in time between sessions where judges sit with each other on an argument calendar. This last effect is particularly significant because, during court week, judges on a panel often have lunch or dinner together and get to know each other better, facilitating subsequent communication about cases or court business.

Judges' ability to feel that they are communicating effectively is very important to the court's ability to function. Because the court's judicial business is carried out largely in three-judge panels, and the court's present eleven-judge en banc is the same size as the full en banc of ten years earlier, the court's doubling of size has not had a great effect. Prior to installation of the electronic mail system, the circuit's geographic size was becoming a real barrier to communication. At that time, effective communication depended on paper coming from over twenty geographically-scattered judges. Getting communication quickly and effectively was crucial to preventing the body from falling apart.

The geographic area covered by the Ninth Circuit is the entire Far West and then some. In the early 1980's only five of its active-duty judges, including the chief judge, and two senior judges were stationed at the circuit's headquarters in San Francisco. There were nine active-duty judges in the Los Angeles area, but they were in three different locations. Other judges were scattered from Seattle and Boise in the north, through Reno and Sacramento, to Phoenix, Tucson, and San Diego in the south. In addition to this dispersion, the Ninth Circuit hears arguments at more than one location, which contrasts with other circuits. The Ninth Circuit principally sits at Pasadena and San Francisco (in consecutive weeks each month), with regular Portland and Seattle sittings occurring during the same week as the Pasadena calendars. If all arguments were held in one city, as in most circuits, nonresident judges would have somewhat more opportunity to interact with the resident judges, potentially increasing collegiality.

Judges are evenly divided as to whether the court's geographic reach affects communication. However, they clearly believe that increased distances make face-to-face contact more difficult. Furthermore, face-to-face contact is thought "to take the sharp edges off communication" and to make it "less sarcastic and sharp" than when

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electronic mail is the vehicle.\textsuperscript{11}

One must remember that even where all the judges were in the same place, communication was “primarily by memo.” Memos are the primary means of communication even if a judge could “run down the hall and ask questions” and “could iron out things faster” because “office visiting brings about consensus — memos won’t get it done.” This suggests it was the judges’ location, not the court’s geographic dimensions, that affected communication.

Because all judges are not in the same city, a principal concern was whether a judge was either the only judge in a city or was in the same courthouse with several others. In the latter situation, the judges were likely to see each other somewhat more often, although they would be on separate schedules or go their separate ways. Moving all the judges to one location, once an issue in the circuits, was no longer an issue. The dislocation of judges’ families, reinforced by the careers of judges’ spouses, made it impossible.

\textit{Technology}

Technology can serve to diminish possible effects of these factors on communication. If caseload makes keeping up with colleagues’ opinions more difficult, research, by judges and particularly by their law clerks, to locate cases “on point” is greatly facilitated by the availability of WESTLAW. WESTLAW allows judges to “call up” cases without having to remember them until they are needed for an applicable opinion.

With respect to the numbers of judges, many agree that “[i]t is no harder to talk to all of the judges than to one because of the technology of sending a memo simultaneously through the electronic mail.” “On matters of merits and legal issues, questions of discretion and strategy, it allows as fast communication as if you were in the same city.” Because such communication is “virtually instantaneous and unimpeded,” it also reduces the effects of the circuit’s size or any judge’s location. This is true in much the same way as having a phone with a pre-programmed “bunch of buttons,” meaning that one “can talk easily” with anyone on the court.

\textsuperscript{11} The view that even technology like electronic mail cannot substitute for face-to-face communication — certainly the traditional view of the matter — is found in the comments about the need for the chief judge of a federal appellate court and the circuit executive to be in the same city: “[E]ven with the wonders of modern communication there is no substitute for direct and close association at the same location. . . . The separations inevitably lead to delay and misunderstandings.” J. Macy, Jr., \textit{The First Decade of the Circuit Court Executive: An Evaluation} 44 (1985).
Technology makes it less necessary to decentralize the court. The availability of central computers and their ability to record cases filed in, say, Los Angeles makes it less necessary to have staff components at several locations throughout the circuit. As one judge states: “If you can handle so much on a computer, you don’t need to decentralize.”

II. A Sketch of Case Processing

After judges receive briefs in a case on an argument calendar, communication between judges’ chambers commences. Initial discussion focuses on which cases require bench memoranda and which judge’s chambers should prepare them. Once judges and clerks examine the briefs, there may be communication about whether counsel should be asked to brief recent cases or be prepared to address specific issues at argument. Other pre-argument communication centers primarily on “mechanical” or “procedural” matters such as whether the judges should dispense with argument or grant continuances.

Prior to holding court, the judges may meet briefly to discuss whether to ask certain questions, but such meetings are not routine. Immediately after each day’s session, the judges hold “bench conference” to discuss the cases, assign opinion-writing duties, and decide whether to issue a published opinion or an unpublished memorandum (“memo dispo”). This is the only time, in all but a very few cases, when the three panel members meet face-to-face to discuss the case.

Once the judges return to chambers, the next communication is circulation of a draft opinion by the writing judge. This prompts concurrences or suggestions for changes which are directed at both the opinion’s thrust and specifics, including minor stylistic and cite-checking errors the judges call “nits.” After the writing judge redrafts and recirculates the opinion, it is agreed upon and filed.

Communication with judges not on the panel may occur prior to the case’s resolution. That communication focuses on whether another panel has a case with the same issue. However, communication concerning the case is more likely to expand beyond the panel’s three judges once the opinion is filed. Other judges make suggestions or inquire about precedents missed or unsatisfactorily interpreted. If the panel’s response, including any modification of the opinion, does not

12. The bench memos are circulated roughly one week prior to argument.
satisfy other judges who are sufficiently concerned, they may initiate a call for an en banc court. Communication among all of the court’s members is most extensive in the period after a three-judge panel files its opinion, particularly after an en banc call. After a formal en banc request, communication among all members of the court occurs within a fixed time, after which the judges vote.

If the court votes for an en banc, then a “limited en banc,” which comprises the chief judge and ten other judges, is drawn by lot.13 If argument is to be held, as with three-judge panels, pre-argument communication is generally “administrative,” concerning the time at which to hold argument. However, pre-en banc communication may also include questions the judges wish counsel to address. The post-argument conference may last several hours, with the chief judge or the most senior judge in the majority assigning the majority opinion. Preparation of a dissent is assigned by the dissenters’ most senior member. Again, with a three-judge panel, subsequent communication usually awaits circulation of an opinion to both majority and minority judges.

Screening Panels

In addition to cases argument panels handle, the Ninth Circuit disposes of some cases through screening panels. Three-judge screening panels remain together for a year to decide simple “slam-dunk” cases in which Ninth Circuit or Supreme Court precedents clearly dictate the result. Staff attorneys identify eligible cases from those that have received low weights in the court’s present case-weighting scheme.14 Cases go to the screening panels if they are relatively simple and will not benefit from oral argument. Any member of the panel can reject a screening case, which means that it is sent to a regular argument calendar.

Screening panels use two basic, equally preferred, methods for handling cases, the serial and parallel methods, plus some “hybrid” methods. Each affects communication among the judges differently. In the serial method, case materials go to only one judge. That judge, after finding the case acceptable for screening treatment, prepares a memorandum disposition and sends the materials to a second judge.

13. The Ninth Circuit is alone in having availed itself of the option, permitted large courts by the 1978 Judgeship Act, of creating an en banc of less than all its members.
14. The court’s staff attorneys examine the briefs in each case and assign a weight (1, 3, 3L, 5, 7, 10) to the case on the basis of its complexity. The case weights, in addition to being used to determine eligibility of cases for screening panels, are also used to compose the clusters of cases that will comprise a three-judge panel’s calendar.
The second judge, upon determining the disposition acceptable, sends it to a third judge.

In the parallel method, the three judges receive case materials simultaneously. The judges usually confer, and if they all agree that the case should be retained in the screening process, one judge prepares a disposition.

In one kind of hybrid, the three judges get the materials simultaneously as in the parallel system, but a writing judge is designated, as in the serial system. Before they confer, the three judges consider the cases, notifying the writing judge as to which cases are appropriate for screening.

There is less communication on screening panel cases than with argument panel cases, and the particular means depend upon the screening method. In the serial mode, communication is almost entirely by memorandum. In the parallel mode, judges frequently use telephone conferences, although they also rely on written memos.

III. Means of Communication

Until the early 1980's, judges had two basic options when communicating with another judge. If the judges were in the same building, there was the possibility of "going down the hall" or "upstairs" to talk. Otherwise only the telephone (fast) and the Postal Service (slow) were available.¹⁵ There were also facsimile transmitters, but they did not receive significant use. Recently, a third option, electronic mail (CCI), became available. Electronic mail transmits messages which, when created on a word processing terminal, are sent simultaneously to one or more members of the court. Judges use electronic mail as the primary means of transmitting not only routine administrative communications and draft orders, but also draft opinions, comments on colleagues' opinions, and responses to suggestions for an en banc court. However, many judges still use the telephone for between-chamber communications prior to argument and to resolve many minor matters.

¹⁵ These were the same communication options available in other institutions. For example, Congress also had a choice between mail, with "a long time lag between initiation of an information request and an answer" and telephone which was, "inconvenient for coordinating schedules with district offices in other time zones, difficult as busy people played 'telephone tag,' and inconvenient when the technology for sending hard copy materials over the phone lines was rather primitive." S. Frantzich, Congressional Applications of Information Technology 28-29 (1985) (prepared for the Office of Technology Assessment, United States Congress).
There is also some face-to-face contact.\textsuperscript{16} If a judge works in the same building with other judges, there is an opportunity for them to talk. Most face-to-face contact, however, occurs during the post-argument conference, as well as during any socializing that might take place during court week or at meetings of all the judges. During court week, judges from out of town join local judges for lunch. These gatherings may extend to dinner, although at times only the out-of-city judges dine with each other, reinforcing the contact from sitting together on panels during the working day.

Although face-to-face, relaxed, collegial discussion happens less frequently than most judges would like, they value it because “charm and eye contact” is far better than “academic putdowns in memos,” and it could lead to “drawing to a conclusion on important points of law.” The absence of face-to-face communication among judges is shown in the complaint of one judge who states, “If there is a problem with this job, it’s that there is too much writing and not enough face-to-face communication.”

A. Variations in Use

Some judges say that the primary means of communication depends on the case or on the panel’s presiding judge. However, judges generally agree that written communication -- transmitted by electronic mail, not the Postal Service -- is the most frequently used means of communication, for cases on regular argument calendars both after argument and at earlier stages of considering a case.\textsuperscript{17} All but one judge responding indicated either memorandum or electronic mail as the most frequently used means of communication. Only one claims the telephone received most frequent use, with several judges indicating that the telephone is the least frequently used vehicle.

\textsuperscript{16} This contact begins during a judge’s orientation to the court. Judges joining the court are appointed a “Big Brother” or “Big Sister” to work closely with them and to be available to answer questions about office procedure, deciding cases and any other matter. During orientation, other judges make themselves available to answer questions or open their offices to the new judges, enabling them to learn more about handling the flow of court business.

\textsuperscript{17} An earlier study of the Third Circuit, the first court to implement an electronic mail exchange system, found “an overwhelming preference for using the word processing and electronic mail service,” once reliability was improved. Roughly ninety percent of intracircuit correspondence was sent by that means. J. Greenwood, \textit{Follow-up Study of Word Processing and Electronic Mail in the Third Circuit Court of Appeals} 6-7, 17 (1980) [hereinafter Greenwood]. For the Third Circuit’s mixed reaction because of low reliability, see J. Greenwood & L. Farmer, \textit{The Impact of Word Processing and Electronic Mail on the United States Court of Appeals} 34-39 (1979) [hereinafter Greenwood & Farmer].
Some judges estimate that ninety-eight or ninety-nine percent of their post-conference communication is in writing.

In 1977, the phone-mail option led some judges to increase their use of the phone. By 1986 the electronic mail system caused decreased use of both the regular mails and the telephone. Now, “technological change makes quick communication feasible,” thus “proportionately diminishing” telephone use. Where you “used to have to do it by mail — now, except for very bulky matters, we use telecommunications.” Judges’ positive 1977 statements about the phone suggest that its decreased use by 1986 stems less from any inherent, or absolute, deficiencies of telephonic communications than from significant advantages in an electronic mail system with hard-copy output.

Some variation among judges’ use of certain modes of communication relates to the fact that the judges communicate with some Ninth Circuit colleagues more than with others. As one judge states, “With those I was more likely to communicate with, I am also more likely to pick up the phone.” In 1977, ten of fifteen Ninth Circuit judges said they had differing amounts of communication with colleagues for a variety of reasons. These reasons included the following: (1) administrative (more frequent contact with the en banc coordinator); (2) geographic (judges in the same city might lunch together); (3) personal (communicating with judges who were thought to be more amenable to suggestion would do more good); and (4) ideological (more with those with whom judges were “philosophically aligned”).

In 1986, the proportion of judges noticing a differential level of communication was even higher. Twenty of twenty-three judges said they communicated more frequently with certain colleagues. However, differences appear to be less than ten years earlier, in part because there are more judges, with contacts “thinner” (spread over more judges). Some difference in contact results from being assigned to sit with particular judges. Because “our sitting with each other is not spread out as it is supposed to be,” it may take quite a while before one judge sits with a particular colleague. Some differential contact also stems from the court’s administrative work, with the chief judge receiving communications from judges simply because he is chief judge. One judge observes that he was likely to call Judge Browning “because he is chief, one or two times a month — about going off the calendar or getting excused from a meeting.” Also, increased contact comes from sitting on the court’s Executive Committee or the Circuit Council.

Having judges situated in the same location “doesn’t lead to as
much talking as one might think.” Judges in the same building “can’t communicate on common cases [because] we don’t have any.” Moreover, because “communication is controlled by the tradition of using memos,” you “can’t stroll down the hall and chat on a case.” Judges in the same building might lunch together, but different schedules put them in (and out) of town at different times. Even if they are in town simultaneously, they may “brownbag it when rushed” and thus stay in their own offices, or prefer not to join their colleagues, with some even being called “recluses.”

However, some judges indicate that proximity does result in increased contact. There can be “frequent contact with people down the hall.” For example, one judge indicates that he deals more frequently with another judge “because he was in the same building” and “was my Big Brother initially and I was asking him for guidance.” Also, the judges in the new Pasadena courthouse met frequently to deal with matters concerning the building.

Personal friendships, some from pre-court days, also help explain differences in communication. There are “some I would never talk to except if at a table at a court function,” and others “you feel close enough to so when you read an opinion, you would feel free to rib, comment, without offending.” Thus, “if a friend has written something that might embarrass him, I will call it to his attention,” but with others, I “don’t know if they might be resistant, and don’t communicate unless it is really major.” Interestingly, friendship and ideological compatibility were not thought to be identical. Because of personalities, a judge might be more likely to talk to a fellow judge whose doctrinal views were not shared.

As to whether the judges use different means of communicating with some colleagues, the appellate judges were evenly divided in 1977. One reason was logistics — reaching the judge in Hawaii was difficult. Another reason was psychological, with one more likely to use the phone for cities that seem nearer. The more important reasons stemmed from recognition of colleagues preferences and foibles. Some judges “don’t focus as quickly on a case when you call” or “are not receptive to telephone suggestions.” The mail was commonly used in this instance. However, where the judge was “sensitive about anyone being critical in writing about that judge’s written work,” use of the mail might be counterproductive.

Judges in 1986 are also about evenly divided, with some using the phone more frequently with close friends or responding to individual preferences. “All judges have different styles and individual idiosyncrasies — how we do our job, how we respond, how we com-
municate.” “Some judges are more formal than others,” observes one judge; “some judges are comfortable with the CCI, some easier by phone, some prefer mail and are more comfortable with it than with the CCI.”

B. Telephone

Use of the telephone, which has decreased since 1977, at least provides voice contact, and is facilitated by having phones programmed so that a judge need only push one button to reach another judge. The fact that “one doesn’t have to think to dial increases oral communication by telephone.” “Decentralization in the court is easier to overcome” when one can talk instantly to someone and get a memo in ten minutes via CCI. Judges use telephones frequently in the pre-argument period to handle many procedural and administrative matters. They also use the phone at other times to “talk over immediate problems or substantive matters.” For example, in the post-argument period, one judge may call another, asking whether the panel had taken a particularly relevant case into account. The telephone may also be the best means of communication “if you want to say something you’d not wish in print,” know the judge you are calling, and do not want the message to be seen “by numerous clerks and other judges.”

A disadvantage of the phone is that it is “bilateral where what we do on a panel is trilateral.” A phone call to one panel member has to be repeated to the third, because judges believe communication from one judge should be to both other members of the panel. With separate phone calls, one is also likely to “give one judge one message, another judge another message,” even if not doing so consciously, with content from the first discussion being added to one’s message in the second discussion. Use of the phone is appropriate in contacting only one judge, for example, where a dissenting judge, before responding, tells the other two to “get your heads together.” However, even in those situations, the phone does not receive as much use as the 1977 survey indicated.

Telephone calls are thought to be “ineffective” and “inefficient” because they interrupt another judge, a point made repeatedly. The judge receiving the call is not likely to be thinking about the case in which the caller is interested: “When you pick up the phone, the other judge has his mind on another case, and a day’s preparation is necessary to respond.” The calling judge perhaps may benefit from a telephone call by obtaining some immediate feedback, but the cost of immediacy may be diminished quality. All the judges may be “up to
speed at the same time" at the bench, but "[when] we disperse, we do different things with our time." If an opinion is written six weeks after the panel's conference discussion and "goes to a busy judge, who then calls two weeks later, after he has turned to the case; [the author] will not remember the opinion and will have to call back, and then the first judge won't remember his point." As another judge states, phone calls might be "O.K. for selling shoes, but not for our business."

Conference Calls: Conference calls would seem to be a likely option if the communication must include all three panel members, particularly where "the loss of personal contact is significant" because of the judges' geographic dispersion. Although it was said that "[y]ou can get reactions and counter reactions" from conference calls, their benefits are not clear to the judges. Some feel they are "easily set up" or that it is "not difficult" to do so, but most others disagree, saying it "takes a long time to arrange an agreeable date." Perhaps because oral communication requires advance planning, preparation and review, there is a general predisposition against argument panels' use of conference calls. However, conference calls are used, more frequently now than earlier, by motions panels. One judge notes that for a conference call to be productive, "all judges must dig out the file and be prepared to go at the issue." According to another judge, a "habit" of conference calls "would be a favored way of dealing with some matters," but he concedes many other judges "rely more on paper" to communicate. Thus, despite its low level of use, few think the court was making insufficient use of telephone conference. One judge claims, "Telephone conference could be used to greater advantage on some matters," but quickly adds that he is "in the minority on that."

C. Written Communication

In 1977, well before electronic mail was available, written communication was preferred over the spoken word, although a number of judges felt a combination of oral and written communication— for example, "a quick concurrence by telephone when you know the other judge is waiting," confirmed by a memorandum — was most effective. In 1986, the preference for written communication —

communication by memorandum — was abundantly clear. Reasons supporting use of written memoranda and use of the electronic mail system overlap. This is evident when the judges' speak interchangeably about written memoranda and "use of the CCI." However, these two means should be treated separately because the advantage of written communication, however transmitted, is the particular attention it receives from the judges.

Written communication is necessary even within the judge's own chambers. It causes less interruption and allows a person to focus better on the material. The need for written communication within the office increases with the growing size of an appellate judge's "establishment." As Fifth Circuit Judge Alvin Rubin notes, "Each circuit judge now has three law clerks, two secretaries and the services of staff law clerks, the staff of the circuit clerk's office, and the circuit executive. He has a small appellate enterprise." To the extent the judge travels — in the Ninth Circuit, at least once a month—the need for written materials upon the judge's return increases. If the judge were in town, perhaps one would not have to use written communication within chambers as much as is now necessary, but the judge's absence almost requires it. The situation is not a cozy one in which judge and clerks sit around and talk most of the day.

1. **Memoranda**

Only one judge speaks negatively of memoranda. Although conceding that written communication "permits one to take great care in expressing thought," he feels that once written, a point tends to be "engraved in stone," making it "difficult to dislodge an individual" from a position. On the positive side, not only does a memorandum "make for more exact communication, with less chance for misunderstanding," but it also allows other judges to reflect, have their clerks analyze the document, and "frame a more precise response in writing" than would come from "reaction around the table" at post-argument conference. As the judges are working toward a written document, written communication is thought to be far better than oral communication for responses to proposed opinions. In fact, the

20. Only one judge said the memorandum was the least useful means of communication; only one judge so designated the electronic mail system.

court requires that a judge's responses to another's draft opinion include suggested wording. Another advantage of is that it "provides a form of record in the file."

Communication by memorandum, in addition to its inherent advantages, also has advantages over telephonic communication. Written communication is "less intrusive" and allows another judge to deal with a case when it is "timely" for that judge. Furthermore, a written memorandum does not force a judge to "drop everything." Nor does one "have to try to fit into each other's schedule" as telephonic communication requires. Thus, the written memorandum both respects colleagues' "space" and provides a better quality exchange among judges than does the telephone. With written communication, "someone gets out the file and can turn to it in orderly fashion." This is particularly important because "volume and caseload" are "the prime reasons for written communication."

The court's functioning through three-judge panels and "our rule that we are a collegial court" provides another principal reason for using written communication. It is "more in the spirit of operation of a panel" to use written communication to the two other judges. Communication with both other panel members also "avoids the tendency to fractionate the panel," as a telephone call between only two judges might.

2. Electronic Mail

Judges favor electronic mail for many of the same reasons they favor any written communication. One judge finds that electronic mail produces "no measurable qualitative difference" and another says that while it "shows promise of being a plus, I don't know if it is a plus." However, most judges respond positively to its presence. Before examining the advantages and disadvantages that judges perceive in its use, it is important to note system difficulties that have affected judges' views.

a. System Problems

Most negative evaluations, except for one judge's concern about "leaks and computer privacy," focus on mechanical difficulties or "machine problems," particularly the system's being "down." "Machine problems" have been experienced, particularly at the system's early stages. These have occurred less over time, "either as a result of trial-and-error or experience of the operation and maintenance
people.\footnote{22} The litany of complaints is not unlike those earlier in the Third Circuit.\footnote{23} “Mail is not always delivered; the thing breaks down; only a fraction of the court gets a message; some didn’t get it, so I get the answer before the question.” Judges “sometimes don’t know for a couple of days” that something hasn’t gone through. Although “you can catch up on writing your opinions” when the system is down, such difficulties not only are annoying but also add to the volume of communications. Messages that may not have been received must be resent. However, some complaints are more serious, dealing with dislocation produced by the new system. One judge, displaying something more than simple annoyance, says the system “screwed up my chambers,” and that it took “two years for it to work,” producing frustration when the system didn’t work.

In evaluating these comments, one should keep in mind that some complaints “are inevitable in introducing something new” and that the judges, through discussions at court meetings, were involved in adopting the system. Judges, however, tended to base their evaluations on their secretaries’ views.\footnote{24} After the secretaries’ bad experience with the system when they tested it at the vendor’s facility, many memos were exchanged and much discussion took place concerning the system both at court meetings and by telephone. That early negative experience was difficult to dissipate, and helps explain the judges’ tendency to characterize all problems as system problems rather than problems in operator (secretary) training.\footnote{25}

The early use of the CCI illustrates that a system with a bad history becomes a natural “goat” for all sorts of mistakes. This, however, may not be all bad. In judges’ chambers, which can be stressful working environments, it is necessary to point a finger at something, and it may be better to point at the machine than, for example, at the junior secretary who was the initial word processor.

\footnote{22} The equipment was installed in early 1984, all chambers had equipment by the summer of that year, and the secretaries had been trained by that time. Most problems were fixed by early 1985. Similar increases in reliability occurred in the Third Circuit. Greenwood, supra note 17, at 9-10.

\footnote{23} See Greenwood & Farmer, supra note 17, at 37-38.

\footnote{24} It has been suggested that the adaptability of offices to the new system is less a function of the age, seniority, or judges’ prior experience with word-processing equipment than of the views of the office’s dominant secretary. However, judges who joined the court after the “bugs” were eliminated from the CCI were more comfortable with the system than those who experienced its initial implementation.

\footnote{25} Apparently some secretaries were refusing to push the correct key, but were blaming the system.
b. System Acceptance

Despite this rough introduction, and the fact, as Chief Judge Browning has said, "Judges did not embrace the new technology eagerly," there is little question that the system has become integral and an essential part of the court's communication network. At least that was the case in 1986 when the judges had over a year's experience with the system operating at reasonable reliability.

Electronic mail is now at the point where "if we took it away," notes one advocate, "judges would find it painful." As it is, "they kick it if it's down." Perhaps the judges' dependence on the system is best captured by the comment that "if the CCI is unhooked, you are not part of the circuit. It's like impeachment." However, the judges' reaction of "kick[ing] it if it's down" could result from the interruption of any system in use, whether or not the user likes it. Indeed, when the CCI is down, one cannot shift material to another typewriter, as could be done with the court's older WANG system (really only a typewriter) and continue one's work. Moreover, "people can't communicate with you and you can't take the material out of the machine and put it in the mail to its intended recipient."

The CCI now gets high marks even from judges who in 1977 were self-declared "phone freaks." Those who relied more heavily on the mails are also positive about a system that sends written material much faster than the Postal Service. The electronic mail system has resulted in an increase in usage relative to other means of communication. One judge calls this "an incremental change, not a sea-change." Others, however, see the change as quite noticeable. This is because they find it quite desirable that, unlike other forms of communication, electronic mail delivers the identical message, quickly, to two other judges of a panel, to ten other members of an en banc panel, or to all twenty-seven "associates" on the court.

c. Advantages

The norm that a panel member should communicate the same message to both panel colleagues gives the CCI a distinct advantage over the phone. "Electronic mail can go simultaneously and quickly and say the same thing to each judge." It is interesting that many
judges who at one time favored the phone now prefer electronic mail, because, being based on typed input rather than voice input, it is different from the phone. Someone accustomed to the telephone would still do some things on the telephone that are more efficiently done by mail if mail is the only alternative, but will shift to electronic mail when it is available because it allows quick communication in writing. Indeed, electronic mail is likened to face-to-face communication by one judge because one “can have memo-response-response in the same day.”

In comparative assessments, one judge points out that the telephone is “less significant than the CCI because CCI transmission does not interrupt a judge but reaches the judge just as fast as a telephone message.” Another says the CCI allows prompt transmission of detailed changes (including “nits”) in the judges’ opinions, no longer requiring use of the mails for that purpose. Nits can be sent because of the related advantage that one is communicating in “hard copy” easily usable by the recipient.\textsuperscript{28} The court’s rule that a judge commenting on an opinion must suggest substitute language appears to avoid the problem of someone having to use the telephone to get the judge to explain an electronic mail message that the recipient finds too cryptic.

The telephone is also “less permanent and leaves nothing in the file,” unless someone specifically prepares a file memorandum. As each party to the conversation may prepare a somewhat different memorandum, when the memos are retrieved, the participants do not return the same communication. On the other hand, the CCI “makes a record.” One could choose not to get hard copy, but usually it is generated either immediately or when the secretary learns there is something in the “mailbox.” Obtaining the hard copy is almost imperative because not everyone in a judge’s chambers has a terminal, and the judges do not work directly on the system. Thus, material goes from judge to secretary, who enters it into the machine, which

\footnotesize{\begin{itemize}
\item[\textsuperscript{28}] A communications executive suggests that the Ninth Circuit’s use of hard copy may be a function of the small number of terminals and printers presently in place. Not all electronic mail systems generate hard copy, at least not without a specific command; without a specific instruction to the contrary, after a designated period of time many messages are automatically erased. Although an electronic mail message in the Ninth Circuit is not printed until someone in the receiving office directs it be printed, such printing is routine. However, printing of long documents may be deferred from the time of receipt so as not to “tie up” the printer during period of frequent transmission.
\end{itemize}
transmits it to another secretary, who gives it to the judge.

**Speed**: Increased speed in communicating messages may facilitate a judge's work on a case by reducing time lapses between communications. One-week mail delays existed even when another judge responded promptly. Moreover, judges' expectations about the speed of communications have increased, perhaps beyond system capacity. When the electronic mail system was installed, a 48-hour turnaround in communication was considered fast. Installation of the system led to in-chambers expectations that a message sent at 9:00AM would be in another judge's chambers by 11:00AM and would be on that judge's desk at 1:00PM to be discussed. The basic notion, however, had been to transfer a message in approximately four hours. If a judge generates a message in the afternoon, it would be in others' offices by the next morning. These expectations of speed lead to mailbox-watching, which is disruptive of in-chambers activity.

Increased speed, even with realistic expectations, might reduce total case-disposition time. More importantly, it eliminates "one of the major inefficiencies for every judge[,] . . . the need to become re-acquainted with the details of a case after a lapse of time since the last perusal." These comments are not unlike those of Third Circuit judges. Discussions after a panel's opinion is filed, prior to an en banc call, progress much faster with electronic mail. Instead of taking a week or two, the same discussion takes two days. With faster communication, a court meeting is less likely to occur during the discussion period and the "politicking" which divides judges is avoided. More importantly, the increased pace of communication also makes the judges feel they are actively involved; they check the system regularly for "new bits of wisdom." Some judges who wouldn't have participated have "jumped in," a factor contributing to the volume of communications that had not been anticipated.

Electronic mail speeds the time it takes to get a message but does not necessarily affect the time to disposition. Initial Third Circuit experience reveals "only a minuscule savings in time . . . for opinion dissemination and review by the entire bench," although per

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29. Figures are not available for the Ninth Circuit. In the much smaller Third Circuit, where in the late 1970's judges were in only six cities in three states, delivery time was substantially reduced by comparison with Postal Service delivery times; "[a]ll localities showed major time savings . . ." however, savings were greatest for "more distant . . . or remote . . . localities." Greenwood & Farmer, supra note 17, at 40-47.
30. Neisser, supra note 18, at 101. See also Blend, supra note 4, at 7.
31. Greenwood, supra note 17, at 24; Blend, supra note 4, at 6.
curiam opinions were handled more quickly. Subsequent data, however, shows considerable time saving for all types of opinions.\textsuperscript{32} Compressing some part of the communication process does not necessarily mean the case will be disposed of more quickly, because delays occur at other stages. Thus, while judges tend to talk about decreased time from completing a brief to argument, the time from argument to disposition is often quite long. The court’s movement toward more prompt disposition is more likely a result of the screening mechanisms and other innovations and not necessarily because of electronic mail. At a minimum, it is difficult to see any particular contribution by electronic mail, and no one suggests that reduced disposition time is either a primary or even a secondary reason (or benefit) for using electronic mail.

Before electronic mail, the volume of the judge’s work usually allowed them to arrange it to provide an efficient work flow. However, arranging that work was likely to have been affected by the sequence in which items were received by mail. Electronic mail may have produced a more effective work pattern because it gives judges more discretion in allocating their time. Work within the office is better organized with electronic mail. However, since there is so much of it, individual cases do not “get out” faster. Electronic mail is not likely to give clerks more research time, because their schedule is governed largely by when briefs arrive in chambers — six weeks before argument, with bench memos due in other judges’ offices one week before argument. Perhaps the speed with which bench memos can be transmitted does allow the clerks a few more days than if they had to use the mail or had to resort to last minute use of overnight express mail service. If this is the case, then electronic mail does give them a little more time in that situation.

d. Perceived Disadvantages

The flipside of the ability to send a message promptly is possible damage to the court’s collegiality. Concern has been expressed that the system’s ease of availability will lead a judge to send a tart memo, a “zinger” or a “ratfink” memo, without pondering its effect as a judge could do in reviewing a letter prepared for signature. As an observer of electronic mail in other contexts notes, electronic mail “tends to lead to longer, more self-absorbed and more impolite communications.” Even when not intended as such, the communications

\textsuperscript{32} See Greenwood \& Farmer, \textit{supra} note 17, at 57-60. See also Greenwood, \textit{supra} note 17, at 31.
may be perceived as cutting: "A short and to the point piece of electronic mail may be seen as curt and abrasive when that was not intended." The "bite" of such memos may leave frayed edges and wounds difficult to soothe, particularly because face-to-face contact to soften those written exchanges is infrequent, as the judges do not sit together for many months.

Along a similar vein, electronic mail may produce greater social isolation of the judges as they begin dealing with each other via a terminal. The judges' lessened knowledge of each other may make it far more difficult for them to communicate informally or to pick up the phone to resolve matters when use of a memorandum is inappropriate. The greater ease of communication by memorandum may thus create a momentum and social situation within the institution that reinforces the judges' lack of appreciation of each other's foibles, although such appreciation is crucial to effective communication in a "collegial" body.

Of particular note are the adverse effects on judges who do not get onto the system. Although active-duty judges taking senior status now will remain on the electronic mail system, those senior judges who did not get onto the system initially, in part because they drew back from doing so, saw their participation in the court's communication flow decrease dramatically. Other senior judges who were more interested in the system and managed to get their secretary onto it on at least a part-time basis stayed in the communication flow.

Problems arise in dealing with judges, including district judges, not on the electronic mail system. It is "an extremely serious burden on associates if you are not on the system." At times, circuit judges use electronic mail to communicate with district judges by sending messages via circuit judges in the same city and asking them to deliver the messages. The judges feel this burdens their colleagues. Thus, communication with those "not plugged into the system" generally must be by telephone or by memorandum sent by mail, making communication with district judges slower. However, one judge says the need to use the mail in communicating with district judges proves a lesson: "we do get all done on time" even using the mail.

Office and Staff Effects: The effects of the electronic mail system

34. It should be noted that the effect of written memoranda in producing sharper exchanges than telephonic or face-to-face communication did not originate with electronic mail; even earlier, a judge's reliance on written memoranda could exacerbate tense relations with colleagues. See M. Schick, Learned Hand's Court 75 (1970).
on judges' and offices' work patterns are also substantial; judges noted negative effects on office work. For instance, the system "almost requires a second secretary" because if one's sole secretary is ill, "the life support system is unplugged." The judges, other than one of the court's newest members, are not trained on the system.86

Problems developed when the court's electronic mail system was installed. Typically, the junior secretary was hired as a word processor, and the new system tended to shift power to that secretary with the lead secretaries feeling they had lost their skills. Use of the system was set back until senior secretaries learned the system and the old balance was restored.

Conflict may develop among staff as to who is to use the machine, perhaps a function of each judge's office having only one "mailbox," two terminals, and one relatively slow printer. The problem is evidenced by the statement that "effective use of EM in any organization requires the availability of enough equipment so that it is easy and convenient to use. Having to go to another room and 'bump' someone else from a terminal clearly discourages use."

One judge who dislikes the system's effects, "personnel-wise and otherwise," comments on the "personnel problems" that the system caused by saying, "We must either legalize heroin (put a terminal on every desk) or outlaw it and enforce the rule." A colleague joining the call for more terminals claimed that his office could do two times its present work if there were a faster printer and if all the clerks had a terminal, because the "bottleneck" is getting work from the clerks and getting it typed.86 He concedes, however, that more opinions "might just accumulate on my desk because sometimes I'm the bottleneck."

The fact that mail arrives continuously throughout the day appears to affect the pace and patterns of intra-office activity, to some extent contradicting the comment that "electronic mail doesn't interrupt the flow of traffic in other judges' offices; they can read at leisure." Mail used to come only once daily, and then not again until the next day. Now, it "keeps coming in all day," so "you are never sure you have the mail." "It spits out mail all day long: it's not just a matter of opening your mail at the beginning of the day and that's

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35. Although law clerks may know how to use the word-processor, they are not likely to be trained on the electronic mail system so they are unable to serve as a backup for an absent secretary. See also S. Frantzich, supra note 15, at 49-50.

36. Laser printers, far faster than the previously used spinwriters, have now been provided. However, obtaining them took some time because they were "tied up in the bureaucracy" as well as being a "Gramm-Rudman problem" in terms of the availability of funds.
it.” One should keep in mind that the delivery time is affected by how frequently judges check their “mailboxes,” and the Third Circuit study found most judges’ offices checking at least three or four times a day. Thus, while the judges are not interrupted by the electronic mail in the way they are interrupted by a telephone call, they may feel interrupted by the system.

Some judges seemed driven by the system rather than in control of it. At the very minimum, their work patterns are considerably affected by technology. This is evident in the judge’s comment, “I’m curious, so I want to read the mail as it comes in.” Thus, the system “sets a new discipline and order on my work schedule.” This view is echoed by the judge who claims the continuous mail delivery doesn’t let him “have a chance to establish a routine.” The system is also said to lead to “short-term material taking over from longer-term duties. When electronic mail came in, you think you have to deal with it promptly,” even if the message is not essential. Secretaries may feel that if something has come over the system—even though casual messages are sent—it must be important and therefore should be printed promptly and given to the judge, instead of being screened and held for a more appropriate time. “Electronic mail comes quickly, so you think you have to deal with it quickly; it is different from regular mail, which you could turn to in good time.” As a colleague grumbles, “Now you get something in ten seconds, you don’t get to for a week.”

e. More Paper?

One effect of electronic mail is thought by many judges to be increased communication, particularly more “paper” arriving at each judge’s office. I “get more things to read,” as one judge says. However, does the existence of the CCI really produce more communication than if the only options were the telephone and Postal Service mail? Answering this question in any definitive way is made difficult because the number of judges has increased from thirteen to twenty-three and then to twenty-eight. The CCI clearly facilitates communication and its speed allows each judge to respond more quickly than before its installation. As one judge states, “It is why geographic size [of the circuit] is not a problem in communication.” The CCI creates the distinct possibility of more communication within a given period. “No one anticipated the volume of paper that would go through the

37. Greenwood, supra note 17, at 21; Greenwood & Farmer, supra note 17, at 40.
system," particularly paper connected with calls for en bancs. Initially, this was a particularly serious problem, even " bring the system to its knees." This particular difficulty has been at least partially alleviated by having more frequent contacts between the CCI's central unit and the office-based elements to see if messages are ready to be sent, that is, having the central unit "call" the offices more frequently.

The presence of new technology also leads to the "novelty" or "toy effect," resulting in what might be called promiscuous use of the system. "Electronic mail becomes a toy," according to one critical judge who complains that "we chat and we overuse it." Several colleagues join with comments that "non-essential" material ("asides") that would not be sent by regular mail, such as copies of speeches or jokes judges had heard, were being sent through the CCI system, creating a problem given the system's capacity. Another kind of unanticipated use may be that people send a message by electronic mail because they don't want to speak to someone else. "Why call him just to tell him something, when he can read it in the electronic mail?"

In these ways, the volume of communication has increased. Casual memos, which would not have been sent if a secretary had to make three copies and prepare envelopes for them, are now sent. However, sending such messages may be important for the "connectivity" of the court. The result of the increase in communication, from whatever causes, is that "the caution light is on," remarks one judge, who reminds his colleagues that there is regular mail. "We must be careful of what we send because we may be blocking something more important." Need for such care is shown by the fact that the judge held a discussion of CCI "etiquette" at the court's May 1986 Symposium.

Because the increase in volume may be equally attributable to the present twenty-eight judges as much as to the CCI itself, separating the relative effect of CCI from the effect of the numbers of judges is almost impossible. If there had been CCI equipment available to the thirteen-judge Ninth Circuit, more paper would have been "flying" then as well. One must, however, keep in mind the judge's comment that there is not more paper flowing now than earlier, and that earlier, judges had also complained about too much paper flowing in the court. Nonetheless, as the number of judges increased from thirteen to twenty-three and then to twenty-eight,

38. For unexpected use in the Third Circuit, see Greenwood, supra note 17, at 12-15.
plus some senior judges, some said the amount of communication doubled.

Perhaps the judges, particularly those who arrived after 1978, have confused their perception that there is more communication — a generally high volume — with the thought that there is increased communication resulting from the use of CCI. After all, the CCI allows transmission to “multiple others” without anyone having to prepare either multiple copies on a photocopying machine or envelopes for mailing the communication. Were electronic mail not available now, the need to prepare so many copies and envelopes might serve to constrain communication among the judges. However, this would be the case only if secretaries’ concerns rather than judges’ concerns govern. One cannot be sure that the difficulty of producing multiple copies of communications without the CCI would have inhibited mailing to the entire court. It is important to remember that the Ninth Circuit expanded to twenty-eight judges because of caseload, not because the circuit had a communications system in place which could accommodate at least that many judges; the communications system came after the judges were added.

Separating the effect of electronic mail from that of word processing equipment may also be difficult. However, it is necessary to do so and some judges did do so in their comments. One judge notes, for example, that “word processing was one thing, the mail element another.” Another complains that his office’s word processing equipment is “too powerful for the electronic mail.” Because word processing equipment makes it far easier to make changes on documents, something known to both secretaries and judges, judges make last-minute changes that would not have been made when only regular typewriters were available.39 A judge who knows how easy it is to make changes may hesitate less in suggesting changes to the opinion’s author. If this is a valid hypothesis, availability of word processing equipment increases communication volume even without the speedier method of transmitting it; with the two together, one may get even more communication.

IV. Concluding Remarks

An examination of communication among federal judges in the United States Court of Appeals for the Ninth Circuit shows relatively little face-to-face contact when they consider cases and far

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39. District judges who sit with the court do not have similar equipment and thus cannot make the changes as easily.
more use of written communication than telephonic communication. Among the factors affecting variations in the means of communication are the judges themselves (their geographic location and the particular judge being contacted) and the stage of a case under consideration. As to the latter, the telephone gets greater use prior to argument than after bench conference, and more use for procedural and administrative matters than for substantive exchange. Written communication is also thought advantageous because it does not interrupt the receiving judge and provides a common document from which all the judges can work. Use of the telephone has also been displaced by written communication because communication among panel members is expected to be trilateral rather than bilateral.

The Ninth Circuit clearly illustrates changes over time in the means of communication used. This is largely a function of technology, in particular the introduction of electronic mail, which has served to change communication patterns, at least once "system difficulties" were overcome and judges and their secretaries became more comfortable with use of the system.

Like the telephone, electronic mail can serve to reduce substantially the effects of the court's wide geographic domain and the dispersion of judges throughout that domain. Its considerable reduction in the time necessary for transmission of written material can help serve to hold together a large body of judges and increase their ability to function as "one court." Because it allows a judge to reach both other judges of a panel at once, quickly, with a written document, electronic mail has displaced much use of the telephone even among those who ten years earlier had relied heavily on the telephone for discussion of opinions.

Although electronic mail has become an integral, and the most frequently utilized part of the communication process among the Ninth Circuit's appellate judges, one must be aware of its potential disadvantages. These disadvantages include such short-term matters as dislocations within judges' chambers and the possibility that judges have been to some extent driven by the system rather than fully in control of it. Perhaps more crucial, particularly once the novelty of the system dissipated, are potential longer-term effects. One such effect is the system's role in facilitating generation of more paper, so that even if this paper is necessary, judges may feel swamped by it. Another is the loss of collegiality that can result as the "bite" of impersonal memoranda reinforces judges' decreased knowledge of each other in a court with many judges who infrequently hear cases together. Even if civility is maintained — and the
Ninth Circuit has worked hard to preserve collegiality — social isolation in a court of geographically dispersed judges can be deleterious.

One must keep in mind the views that some judges hold about further extensions of communications technology. Such views are perhaps best represented by the comment of a judge about videoconferencing, which had been suggested for some use within the court. That judge states that he “would have to quit” if the court came to use the device, because of the severe loss of “human contact” it would cause. As it was, he says, he experiences the “space capsule syndrome,” and “to walk down the hall to talk to my TV set would add to it.”

Technology can facilitate communication within a large appellate court. However, no communications system is neutral in its effects, and any system is likely to produce shifts in patterns of communication beyond any dislocation attendant upon its implementation. Some of its effects will not be seen as positive, and efforts must be made to minimize them. In the United States Court of Appeals for the Ninth Circuit, the introduction of electronic mail is seen by the court’s judges to have had both positive and potentially negative effects. On the whole, this new technology of communication, which certainly requires further examination, has served as part of the “glue” that holds this court together.