News

Net neutrality ruling complicates US transition to IP networks

The court's ruling raises questions about the FCC's authority to require VoIP providers to compete calls, carry all traffic

By Grant Gross, IDG News Service
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IDG News Service - The transition from copper-based telephone systems to IP networks in the U.S. could become swept up in political fallout as the FCC figures out how to regulate such networks in ways that will appease the courts.

A switch to IP-based networks has been progressing for years in the U.S., but a January ruling by the U.S. Court of Appeals for the District of Columbia Circuit calls into doubt the FCC's authority in several areas, such as prohibiting VoIP providers from degrading service or blocking calls from competing carriers, and requiring them to offer service to all customers who want it.

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And the technological changes are rekindling the debate over whether the FCC as an entity should continue to exist at all, or at the least whether it needs a major transition itself.

"Should the commission have any ongoing role in communications networks, or does somehow, the change in the technology make the FCC obsolete?" said Matt Wood, policy director at Free Press, a digital rights group. "We'd say, clearly, it does not. Whatever the technology is, the FCC still has a duty to make sure broadband telecommunications are universally affordable and available and competitive."

The IP transition, combined with the net neutrality ruling, puts several features of the traditional telephone network, long taken for granted by customers, in doubt, said Harold Feld, senior vice president at digital rights group Public Knowledge. After the net neutrality ruling, "the FCC can no longer require VoIP providers to complete phone calls [and] can no longer prohibit VoIP carriers from blocking calls," Feld wrote in a January blog post.

Some telephone customers in rural parts of the U.S. have complained in recent months about dropped calls, and the problem could get worse in an IP transition, Feld said. Public Knowledge, Free Press and some other consumer groups have called on the FCC to reclassify broadband as a regulated, common-carrier service in an effort to restore its regulatory authority, but a move by the FCC to reclassify broadband would trigger a long and contentious battle with carriers.

"Post-IP transition, absent reclassification, the FCC would be unable to ensure that all calls go through when you dial your 10-digit phone number," Feld wrote. "They could -- as they

can with net neutrality -- require companies to disclose if they are blocking calls or otherwise 'managing' traffic in a way that degrades rural traffic."

Why switch?

In some ways, the switch from copper to IP, predicted to happen over the next five or six years, should be relatively simple. Most carriers already offer voice-over-IP services, and at some telecom carriers, two-thirds of voice customers have already cut the cord and switched from traditional telephone service to mobile or VoIP service. Some technical issues will come up, including how to transition old phone-based services like school fire alarms and heart monitors, but the IP transition trials are designed to find and fix those issues

Most telecom policy experts agree that it no longer makes sense for traditional telephone providers to maintain IP networks and the old copper network, often called the PSTN, for public-switched telephone network, used to deliver POTS, plain, old telephone service.

But the move to IP networks, jump-started in January with the FCC approving an AT&T request to run copper-retiring trials, raises complex policy questions about the authority of the FCC.

The appeals court decision on net neutrality came just two weeks before the FCC's approval of IP trials, with the court throwing out the agency's net neutrality regulations because of the FCC's own classification of broadband as an information service, not a telephone-style, common-carrier service.

The appeals court gave the FCC a workaround, however. The court pointed the agency toSection 706 of the Telecommunications Act, which gives the FCC broad authority to ensure broadband deployment. That section of telecom law, the court said, could be used as a hook to pass net neutrality rules.

Section 706 gives the FCC authority to protect customers on IP networks, the agency contends. When asked about the impact of the net neutrality ruling on the IP transition, an FCC spokesman pointed to a speech by agency Chairman Tom Wheeler in February.

"The FCC has the authority it needs to provide what the public needs -- open, competitive, safe, and accessible broadband networks," Wheeler said then. "Indeed, that we have authority is well-settled. What remains open is not jurisdiction, but rather the best path to securing the public interest."

Fundamental values

Some telecom legal experts, including Feld and Wood, aren't as sure. Some telecom carriers, trade groups and free-market advocates are now questioning the FCC's regulatory authority on IP networks, and the new attitude seems to be, "presto, no need for any more commission oversight," Wood said.

One FCC regulation in doubt is its obligations on incumbent telephone carriers to build out their networks to serve all customers in a coverage area, Wood said. "If we're living in this twilight zone where broadband is not technically a telecom service ... it's hard to know how to enforce a build-out obligation," he added.

Public Knowledge has pushed the FCC to focus on five "fundamental" values supported by the current phone system: universal service, interconnection, consumer protection, network reliability, and public safety. The appeals court decision on net neutrality "particularly brings interconnection and universal service to mind because that case focused on no blocking and nondiscrimination rules, but they're not the only issues we're looking at in the phone network transition," said Jodie Griffin, senior staff attorney there.

The court decision "raises pretty clear concerns that the FCC won't be able to implement fundamental principles of the phone network like serving all users and connecting with other networks," unless the FCC reclassifies broadband as a regulated common-carrier service, she added. "So until the FCC uses its authority to call IP-based voice service telecommunications service, the one thing it can't do to the post-transition phone network is actually make it act like the phone network."

'Technology-anachronistic' rules

Still, some telecom experts say its time to retire some regulations along with the copper networks. The FCC's common-carrier rules, some of which date back to a time when the U.S. phone network was one giant monopoly, are outdated, some argue.

For example, the FCC's current interconnection rules are based on geography and no longer make sense, said Jonathan Banks, senior vice president for law and policy at trade group USTelecom. There are "lots of different providers of Internet backbone," making old interconnection rules unnecessary, he said.

A lot of the current telecom regulations are "technology anachronistic," added Larry Downes, a tech policy-focused author and former tech law professor. The old rules were "designed in every sense for the public switched network," he said in an email. "Despite decades of accretions and barnacles, at the core of their DNA they assume both a technical and business environment that no longer exists and definitely isn't part of the all-IP world."

Downes also pointed to old interconnection rules as one area the FCC should scrap in a move to IP networks. "Interconnection is inherently about switched network technology," he said. "In the IP world, the relevant engineering is handled through peering."

Netflix has recently complained to the FCC about peering agreements, and cut a deal with Comcast. But voice interconnection rules don't make sense when voice is just another packet on the network, Downes said.

A VoIP (voice-over-Internet Protocol) network shouldn't be subject to any more provider "mishandling" than other services, Downes added. "That makes sense to any engineer, but it's a hard reality for regulators to swallow," he said. "At the heart of this conversation is an implicit reality that in the all-IP world there is simply less of a need for close scrutiny by, and prophylactic rules from, federal and state regulators, particularly rules put in place at a time when there was only one network, operated by one carrier, which handled all (and only) voice traffic."

AT&T asks for deregulation

For their part, AT&T executives generally say that customers should expect some level of consumer protections in the transition to IP networks. The net neutrality ruling gives the FCC "a lot of flexibility" to proceed with the transition and protect consumers, Bob Quinn, AT&T's senior vice president for federal regulatory affairs, said during a February debate on the transition.

"There's no doubt in the world that the FCC has the ability, they have jurisdiction over [IP-based] information services," Quinn said then. The court decision "gives the FCC enormous leeway to make sure that we can effectuate this transition, that the values that we come to expect from ... POTS service are going to continue."

But the company, in its November 2012 petition asking the FCC to approve IP network trials, called for a range of deregulatory moves in the transition to IP networks. AT&T called for the commission to end its rules requiring carriers to get permission to discontinue service to communities, saying the rule doesn't make sense when the carrier is switching to IP services.

Another set of rules that should be scrapped are service-obligation rules from the FCC and state public service commissions, AT&T said, because some of those regulations prohibit incumbent carriers from retiring the copper networks. The FCC should scrap its compulsory service rules in exchange for voluntary service commitments from carriers that want universal service subsidies, AT&T said.

The copper-to-IP "revolution necessitates an equally fundamental transformation of the legacy regulatory framework," AT&T's lawyers wrote in a later FCC filing. "Today's rules were designed for a voice-centric world in which [incumbent carrier] ILECs owned 99 percent of access lines, and there is no rational basis for sustaining them in a world where ILECs have rapidly declining minority market shares and voice is becoming just one applications among many riding over converged, data-centric networks."

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