

State Regulatory Approaches to VoIP: Policy, Implementation, and Outcome

Robert Cannon*

I. APPROACHING VOIP	480
A. <i>The Genesis of Approaches</i>	482
B. <i>The Functional Approach</i>	485
1. Legal Approach (Application of State Law).....	486
2. The States.....	486
a. <i>Non Cases-in-Controversy</i>	486
i. Florida.....	487
ii. NARUC	488
iii. The Full Policy Circle: Missouri & California	489
a. Missouri	489
b. California	490
c. The Full Circle	492
b. <i>Cases-in-Controversy</i>	492
i. Minnesota	492
ii. Dial-Around Cases	494
3. The Functional Approach Observations	496
a. <i>Legal Precedent</i>	496
b. <i>Function versus Under-the-Hood</i>	496
c. <i>Circular Justification</i>	497

* Views expressed are those of the Author and do not necessarily reflect the views of any living person, organization, or canine. Robert Cannon is Senior Counsel at the Federal Communications Commission. He is also Director of the educational nonprofit Cybertelecom, www.cybertelecom.org. This paper was originally presented at the 2004 Telecommunications Policy Research Conference.

480	<i>FEDERAL COMMUNICATIONS LAW JOURNAL</i>	[Vol. 57]
	<i>C. The Technical Approach</i>	497
	1. Florida.....	498
	<i>D. The Layered Model of Regulation</i>	499
	1. Colorado	500
	2. Guam.....	501
	3. Layered Model Observations.....	503
	<i>E. Market Principles</i>	503
	1. Colorado	503
	2. Pennsylvania.....	504
	<i>F. Hybrid Approaches</i>	505
	1. New York: Vonage	505
II.	OBSERVATIONS	507
	<i>A. The Muddled Process: Goals First</i>	507
	<i>B. Approaches Are Articles Frameworks</i>	508
	<i>C. Market versus Social Concerns</i>	508
	<i>D. On-Off Switches</i>	508
	<i>E. Talking Past Each Other</i>	509
III.	CONCLUSION.....	509

I. APPROACHING VOIP

The proposition is simple. Things that appear the same should be regulated the same. This would seem fair; the syllogism is sound. Phone services provide two-way, real-time voice communications. Phone services are regulated. Therefore things that provide two-way, real-time voice communications should be regulated.

But modernists teach us that how a thing is perceived depends upon perspective. There may be many perspectives of a horse. If I am an equestrian, I might view the horse one way. If I am a hungry mountain lion, I might have a different view. If, however, I am a hockey player, I might have no regard for the horse at all. Which is the correct perspective?

There are many perspectives on Voice over Internet Protocol (“VoIP”) service. The Functional Approach concludes that the appropriate perspective is from a functional standpoint. If a device performs the same technical function as a telephone, then it should receive the same regulatory treatment as a telephone. But why? Is the technology the reason that the regulations exist? Is there some Platonic nature of telephones such that filing tariffs is simply a part of the form of being a phone?¹ If policy

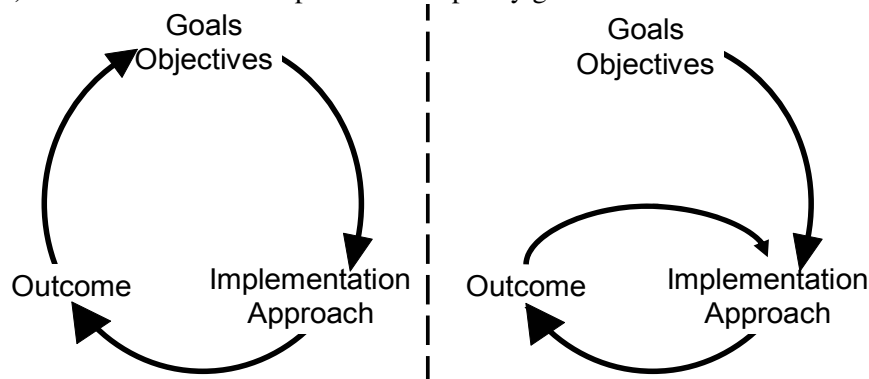
1. Plato proposed that a thing has its own innate form through which it reveals itself.

objectives concern markets, perhaps markets is the appropriate standpoint. If the policy objectives concern public safety or threats to revenue, perhaps those are the appropriate standpoints.

But this Article disappoints. Pablo Picasso offered multiple perspectives of a horse, refusing to give us a desired definitive viewpoint. The notion of this Article is not to resolve the definitive approach to VoIP. Rather, this Article suggests that the process of the approach has itself become muddled. Individuals quibble, contrasting the superiority of one perspective over another, negating the reason why they were looking in the first place.

To successfully view the horse, first, we must know *why* we are looking at the horse. Then we must decide *how* to look at the horse; we must define what “it” is that we are looking at. Finally, we need to consider whether what we looked at is consistent with why we were looking. If a dentist seeks to care for the horse’s teeth, looking at a horse’s rear end probably means the approach is a bit askew.

Policy likewise involves process dynamic. The first question is (A) “why”: what are the objectives, goals, and concerns—the policy’s first principles. The next question is (B) “how”. With what approach will the policy be implemented; what is (and is not) the target of the policy. Finally, (C) does the outcome comport with the policy goals.



The intelligible world contains the eternal “Forms” (in Greek, *idea*) of things; the visible world is the imperfect and changing manifestation in this world of these unchanging forms. For example, the “Form” or “Idea” of a horse is intelligible, abstract, and applies to all horses; this Form never changes, even though horses vary wildly among themselves—the Form of a horse would never change even if every horse in the world were to vanish. An individual horse is a physical, changing object that can easily cease to be a horse (if, for instance, it’s dropped out of a fifty story [sic] building); the Form of a horse, or “horseness,” never changes. As a physical object, a horse only makes sense in that it can be referred to the “Form” or “Idea” of horseness.

Richard Hooker, *Greek Philosophy: Plato* (last modified June 6, 1999), at <http://www.wsu.edu:8080/~dee/GREECE/PLATO.HTM>.

The notion of this Article is that we have confused VoIP (B) implementation/approaches with (A) policy objectives. Instead of asking whether (C) outcome comports with (A) policy, we ask whether (C) outcome comports with (B) implementation/approaches—and receive a meaningless answer. So accustomed have we become to the environment of implementation that we have forgotten why policy exists. We have taken century-old frameworks, sought to apply them to novel situations, and cannot resolve outcomes that appear “artificial.” We quibble about why one approach is superior to the other, without recognition of policy objectives and without comprehension that the approach itself provides no coherent rationale for its own outcome.

Approaches are artificial frameworks used to facilitate efficient policy implementation. They are used to discern what falls within a regulatory program. They are lines drawn in sand that do not themselves inform the observer why the line was drawn at its particular location. The superiority of the Functional Approach, the Technical Approach, or the Layered Model cannot be resolved in and of themselves because we are contrasting implementations without discussing policy goals. To properly resolve VoIP policy, one must move beyond implementation and consider the whole horse.

This Article is the second part of a project to survey and analyze state VoIP policy. The first part of the project surveyed state VoIP regulatory activity.² This part seeks to place that precedent in a centrifuge, segregating out different groupings of precedent. The object was to observe whether different patterns or lessons might emerge. The results were plentiful. This Article represents one set of the observations.³

A. *The Genesis of Approaches*

In 1998, the FCC released the *Steven's Report* to Congress.⁴ In this report, the FCC articulated what would become known as the Functional Approach for discerning whether Internet telephony services should be considered telecommunications services. The *Steven's Report* did not, however, materialize out of the ether. It was a rearticulation of the policy

2. The survey results can be found at Cybertelecom: VoIP: States, at <http://www.cybertelecom.org/voip/states.htm> (last visited Apr. 1, 2005).

3. This Article is limited in scope to state precedent as articulated in state proceedings and does not examine views expressed in FCC proceedings.

4. Federal-State Joint Board on Universal Service, *Report to Congress*, 13 F.C.C.R. 11,501 (1998), at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/fcc98067.html [hereinafter *Steven's Report*]. The report is nicknamed after its author, Senator Ted Stevens of Alaska.

that currently existed: the *Computer Inquiries*.⁵

The *Computer Inquiries* were initiated in 1966 when the FCC began to ponder computers in the network.⁶ There were computers which ran the networks, and there were computers with which people interacted over the networks. The FCC set to the task of studying these computer things and the appropriate regulatory response. After all, AT&T, pursuant to a judicial order, could only offer regulated telecommunications services. If these computers with which people interacted were not regulated “telecommunications services,” AT&T could not offer those services.⁷ In addition, computer services, which included “big iron” main frame computers that could be accessed remotely and promised economic expansion, were dependent upon the underlying telecommunications services.⁸ Those computer services were also potentially (unregulated) substitute services for telecommunications services (unregulated e-mails were then substitute services for regulated Title II telegraph carriers in much the same way that unregulated VoIP services today are substitute services for regulated Title II telephone services). Telephone carriers, for their part, had the advantage of rate-payer paid for main frame computers running the networks, which could be offered up for data processing services during off-peak hours.⁹ Telephone carriers therefore positioned themselves as both supplier to and competitor of computer services.

Devising an appropriate policy approach to these different computers would be an undertaking of wonder and it is no wonder that it took the FCC two tries to get it right. The first principles of the policy were markets and competition. Computer services were exciting, competitive, and innovative players with promise of great wonder. The FCC perceived no reason to regulate them.¹⁰ The telephone network was a vital resource necessary to the country and it was a monopoly. The FCC perceived that regulating

5. See Robert Cannon, *The Legacy of the FCC's Computer Inquiries*, 55 FED. COMM. L.J. 167 (2003), available at <http://law.indiana.edu/fclj/pubs/v55/no2/cannon.pdf>.

6. See Regulatory & Policy Problems Presented by the Interdependence of Computer and Communications Serv. & Facilities, *Notice of Inquiry*, 7 F.C.C.2d 11 (1966) [hereinafter *Computer I NOI*].

7. *United States v. W. Elec. Co.*, 1956 Trade Cas. (CCH) ¶ 68,246 (D.N.J. 1956). See also *United States v. W. Elec. Co.*, 673 F. Supp. 525 (D.D.C. 1987), *aff'd*, 900 F.2d 283 (D.C. Cir. 1990).

8. See *Computer I NOI*, *supra* note 6, para. 7.

9. See generally Delbert D. Smith, *The Interdependence of Computer and Communications Services and Facilities: A Question of Federal Regulation*, 117 U. PA. L. REV. 829 (1969) (discussing interdependence between data processing services and communication networks).

10. Regulation and Policy Problems Presented by the Interdependence of Computer and Comm. Servs., *Tentative Decision*, 28 F.C.C.2d 291, paras. 19–23, (1970) [hereinafter *Computer I Tentative Decision*].

those computers was necessary in order to assure an open network.¹¹ But was there a reasonable approach that could distinguish these computers from those?

In *Computer I*, the FCC implemented its policy with a troubled approach. The implementation focused on technical computer processing, attempting to divine the difference between circuit or message switching, and data processing.¹² The framework that the FCC constructed distinguished between “pure communications” and “pure data processing.”¹³ Pure communications was content transmitted over the network transparently with no change in content or form to the message.¹⁴ Pure data processing was, to put it simply, computer processing.¹⁵ Unfortunately, this did not neatly divide the world; “communications” increasingly utilized “computer processing.” This grey area became known as “hybrids.”¹⁶ The FCC would resolve the classification hybrids on an ad hoc, case-by-case basis.¹⁷ But this approach was not viable as hybrids quickly subsumed the rule. The approach failed to efficiently distinguish these computers from those computers and placed the FCC in the position of conducting a full evaluation for each new scenario.

The FCC recognized its predicament, disposed of the *Computer I* approach, and initiated *Computer II*.¹⁸ The policy objectives remained the same but the FCC needed to construct a new implementation.

Computer II divided the world into basic and enhanced services.¹⁹ These services were defined in functional terms. The services lived in distinct markets. Network infrastructure service could be provided by one company. Computer network services could be provided by another company. The policy concerns for these different markets were different.

11. Regulation and Policy Problems Presented by the Interdependence of Computer and Comm. Servs., *Final Decision and Order*, 28 F.C.C.2d 267, para. 30 (1971) [hereinafter *Computer I Final Decision*].

12. Amendment of Section 64.702 of the Comm'n's Rules and Regulations, *Final Decision*, 77 F.C.C.2d 384, para. 17, (1980) [hereinafter *Computer II Final Decision*].

13. *Computer & Commun. Indus. Ass'n v. FCC*, 693 F.2d 198, 203 (D.C. Cir. 1982).

14. See *Computer I Tentative Decision*, *supra* note 10, para. 15(b).

15. *Id.* para. 15(a). “The use of a computer for the processing of information as distinguished from circuit or message-switching. ‘Processing’ involves the use of the computer for operations which include, *inter alia*, the functions of storing, retrieving, sorting, merging and calculating data, according to programmed instructions.”

16. *Id.* para. 15(e). “*Hybrid Service*—an offering of service which combines Remote Access data processing and message-switching to form a single integrated service.”

17. *Computer I Final Decision*, *supra* note 11, at paras. 27, 31–38. See *Computer I Tentative Decision*, *supra* note 10, at paras. 39–45.

18. See Amendment of § 64.702 of the Comm'n's Rules and Regulations, *Notice of Inquiry and Proposed Rulemaking*, 61 F.C.C.2d 103 (1976).

19. *Computer II Final Decision*, *supra* note 12, para. 86.

Computer I's policy concern remained constant: there was no compelling justification to regulate competitive enhanced services.²⁰ However, basic service that was offered by monopolies (AT&T, GTE, and other incumbents in their respective markets) could discriminate and engage in anticompetitive behavior. The FCC, therefore, regulated basic services for the benefit of enhanced services, creating an open communications platform.²¹

In the *Computer Inquiries*, the FCC first established its policy. It implemented that policy one way. That did not work. It implemented the policy another way. That approach has produced outcomes consistent with policy objectives for almost forty years. That approach was affirmed by the *Steven's Report*, the FCC's first articulation on VoIP. To understand this jurisprudence, one must understand the dynamic and distinction between policy, approach, and outcome.

B. The Functional Approach

In 1997, Congress required²² the FCC to file the *Steven's Report*,²³ examining the interaction between information services (a.k.a. "enhanced services"), telecommunications services (a.k.a. "basic services"),²⁴ and universal service, and whether the increased use of unregulated (read, "doesn't pay universal service fees") information services might pose a threat to the Universal Service Fund. Among other items, the *Steven's Report* turned its attention to the appropriate treatment of "Internet telephony." In so doing, the FCC articulated the Functional Approach: "the classification of a service under the 1996 Act depends on the functional nature of the end-user offering."²⁵

20. Note that while the FCC did not exercise jurisdiction, it did claim jurisdiction and thereby preempted the states from imposing regulations on enhanced service providers.

21. Amendment of Section 64.702 of the Comm'n's Rules and Regulations, *Tentative Decision and Further Notice of Inquiry and Rulemaking*, 72 F.C.C.2d 358, para. 125 (1979).

22. See Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998, Pub. L. No. 105-119, § 623, 111 Stat. 2440, 2521-2522 (1997).

23. *Steven's Report*, *supra* note 4.

24. The Telecommunications Act adopted the Functional Approach of the *Computer Inquiries* (without codifying the policy) by setting forth the definitions of telecommunications and information service. 47 U.S.C. § 153(20), (43) (2000). "We concluded in the *Non-Accounting Safeguards Order* that, although the text of the Commission's definition of 'enhanced services' differs from the 1996 Act's definition of 'information services,' the two terms should be interpreted to extend to the same functions." *Computer III Further Remand Proceedings: Bell Operating Company Provision Of Enhanced Services, Further Notice of Proposed Rulemaking*, 13 F.C.C.R. 6040, para. 40 (1998), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-98-8A1.pdf.

25. *Steven's Report*, *supra* note 4, para. 86.

The FCC distinguished between phone-to-phone VoIP, computer-to-computer VoIP, and VoIP software with no service provider. The FCC looked “under the hood” of the service and selected different “salient features”²⁶ that demarcated the boundary between those services that fall within policy concerns and those that do not.

In using the term “phone-to-phone” IP telephony, we tentatively intend to refer to services in which the provider meets the following conditions: (1) it holds itself out as providing voice telephony or facsimile transmission service; (2) it does not require the customer to use [Customers Premises Equipment] different from that CPE necessary to place an ordinary touch-tone call (or facsimile transmission) over the public switched telephone network; (3) it allows the customer to call telephone numbers assigned in accordance with the North American Numbering Plan, and associated international agreements; and (4) it transmits customer information without net change in form or content.²⁷

This is a description of select technical components of a service. This litmus test has been used repeatedly over time: if a service meets all of these specifications, then it presumably is telecommunications service. If it fails any one of the specifications, then it is not.

1. Legal Approach (Application of State Law)

Closely associated with the Functional Approach is what might be called the Legal Approach, the straightforward application of statutory definitions. Many jurisdictions have codified the Functional Approach in their statutory definitions of telecommunications service. In several instances observed below, jurisdictions confronted with VoIP policy considerations have relied on statutory definitions without further deliberation.

2. The States

The following are instances of state regulatory activity that embrace the Functional Approach.

a. *Non Cases-in-Controversy*

Four states have had non case-in-controversy²⁸ proceedings that have

26. The phrases “under the hood” and “salient features” are borrowed from Commissioner Stan Wise. See discussion *infra* Part I.B.2.a.ii (discussing Commissioner Wise’s testimony on behalf of NARUC).

27. *Steven’s Report*, *supra* note 4, para. 88.

28. A case-in-controversy is a proceeding in which a policy decision will be provided or a litigation will be resolved. Non case-in-controversy proceedings are not binding, do not resolve policy, and do not resolve disputes between parties. Examples of these include

embraced the Functional Approach. Each of these proceedings is a fascinating case study of the application of the Functional Approach. The National Association of Regulatory Utility Commissioners (“NARUC”) contrasts the Functional Approach to the Technical Approach in a manner adopted by this Article. Florida demonstrates the tension of adopting the Functional Approach without comprehending the rationale behind the approach. Finally, Missouri and California present paradigm examples of jurisdictions that conducted an investigation, identified the policy concerns and objectives, and then implemented an approach consistent with those concerns.

i. Florida

In 2000, Florida released a white paper entitled *Internet Pricing: Regulatory Implications and Future Issues*²⁹ in which Florida embraced the Functional Approach:

Looking forward, a key question to be resolved is whether VoIP providers qualify as telecommunications carriers, or as information service providers (or ESPs). Fundamental to this question is whether a service provided over the Internet that appears *functionally similar* to a traditionally-regulated service should be subject to existing regulatory requirements of traditional telephony.³⁰

The Article then reviews the *Steven’s Report* articulation of the Functional Approach and recounts the *Steven’s Report* distinction between computer-to-computer telephone and phone-to-phone telephone.³¹ However, the *Florida White Paper* struggles to discern a rationale for the differing treatment:

It seems that the FCC made an *artificial distinction* between the location at which the packetizing occurs and the technology used to make the initial connection from the subscriber line. Thus, if it emits a stream of IP digital packets over a computer, it is not subject to common carrier regulation, and hence access charges do not apply; if it [emits] a Pulse Code Modulator (PCM) encoded digital bit stream, it’s a phone and [it is] subject to the common carrier regulation and therefore access charges apply.³²

The *Florida White Paper* embraces the Functional Approach, but then is confounded by the outcome. Florida is embracing an implementation

investigations, inquiries, and reports.

29. Florida Public Service Commission White Paper on Internet Pricing: Regulatory Implications and Future Issues (Sept. 25, 2000), at <http://www.psc.state.fl.us/general/publications/paiPDF/internetpricing.pdf> [hereinafter Florida White Paper].

30. *Id.* at 6 (emphasis added).

31. *Id.*

32. *Id.* at 7 (emphasis added).

without understanding the policy goals and, therefore, cannot resolve the results.³³ The *Florida White Paper* concludes that the implementation is “artificial.” This is an astute observation that misses the point; *all* approaches are artificial. Approaches are the implementation of policy, not the policy itself.

ii. NARUC

NARUC advocates a Functional Approach. A NARUC statement reveals a fascinating contrast between the Functional Approach and the Technical Approach.

NARUC’s resolutions on VOIP emphasize that regulatory treatment should follow from the functional nature of a service, not the way it works under the hood. Rather than looking to the technology itself, policymakers should look at the salient features of a service. In most cases, the starting point in our analysis should be what it is to the consumer.³⁴

As presented here, the Technical Approach looks under the hood to a specific characteristic. Yet, the Functional Approach is likewise described as looking at specific “salient features,” also known as characteristics. Both are technical approaches. The distinction appears to be which and how many salient features one looks at. If policy is based on one characteristic, for example the use of the VoIP protocol, that would appear to be the Technical Approach. If policy is based on a collage of salient features, that would appear to be the Functional Approach (in either approach, the question is begged of how one determines which features are salient and which are not).

Interestingly, NARUC is not entirely comfortable with the Functional Approach. By the end of the testimony, the gears have been shifted to concerns over market principles:

The “functional nature” approach does not mean regulating new VoIP services just as if they were traditional circuit-switched service from Ma Bell. Rather it means a rigorous, intellectually honest dialogue about which public interest obligations are attached to which features of a particular service. If the physical structure of a particular service makes its carrier unable to exert market power, for example, that may impact whether the full panoply of economic regulations should

33. The Florida legislature subsequently resolved uncertainty by declaring that it is in the public interest that VoIP not be regulated; in other words, Florida appears to follow the Technical Approach, not the Functional Approach. See discussion *infra* Part I.C.1.

34. *Before the Committee On Commerce, Science And Transportation United States Senate*, 108th Cong. 3 (June 16, 2004) (testimony of Hon. Stan Wise, Commissioner, Georgia Public Service Commission, and President, National Association of Regulatory Utility Commissioners), at <http://www.naruc.org/associations/1773/files/wisevoiptestimony04.pdf> [hereinafter Testimony of Stan Wise].

apply.³⁵

NARUC has shifted from looking at salient technical features to whether the service provider has market power. Nothing within the Functional Approach provides support for or guidance on a market power analysis. These concerns come from outside the Functional Approach.

iii. The Full Policy Circle: Missouri & California

a. Missouri

The Missouri Public Service Commission (“MoPSC”) staff released the VoIP Industry Task Force Report³⁶ in which the staff conducted an extensive review of VoIP policy. The MoPSC VoIP Report is impressive in the depth of its analysis. The staff reviewed FCC precedent, examined policy concerns, and recommended an implementation.³⁷

The MoPSC staff initiates the MoPSC VoIP Report by rejecting a straw man argument:

VoIP telephony is unlike traditional telephone service in at least one significant respect. Although both traditional telephony and VoIP telephony utilize digital services, the transmission medium of VoIP uses Internet protocol (IP) as a transport technology, whereas traditional telephony uses time division multiplexing (TDM) as a transport technology.³⁸

No other relevant distinction is noted. Missouri is implicitly engaged in a repudiation of the mythical Technical Approach. Where the Technical Approach bases policy outcome upon this distinction, the Missouri staff suggests that (a) this is the only distinction, (b) this distinction is trivial, and (c) therefore, policy must be based on something else (where that something else—which will be identified fifty pages later, after the staff tells you what harm VoIP can cause—is the Functional Approach).

The staff moves on to examine how VoIP might impact Missouri. “The following five impacts have been identified: (1) sales tax revenues, (2) Relay Missouri funding, (3) E-9-1-1 funding, (4) regulatory assessment

35. *Id.*

36. VOIP INDUSTRY TASK FORCE, MISSOURI PUBLIC SERVICE COMMISSION, A STUDY OF VOICE OVER INTERNET PROTOCOL IN MISSOURI (Mar. 30, 2004), at http://www.psc.state.mo.us/teleco/voip_task_force_%20report.pdf [hereinafter MOPSC VOIP REPORT].

37. A Study of Voice over Internet Protocol, *Order Establishing Case*, Case No. TW-2004-0324, (Mo. Pub. Serv. Comm’n, Feb. 3, 2004), at <http://www.psc.state.mo.us/teleco/VOIPOrder.pdf>; The Missouri Public Service Commission, Industry Workshop Meetings (accessed Aug. 23, 2004), at http://www.psc.state.mo.us/VOIP_Meetings.asp.

38. MOPSC VOIP REPORT, *supra* note 36, at 1.

funding, and (5) local exchange carrier revenue impact.”³⁹ According to the staff, the impact—the policy concern—is a threat to revenue.

Having identified the policy concern, the *MoPSC VoIP Report* now asks the direct question: Is VoIP a “telephone service.” Applying the Functional Approach, the staff clarifies, “VoIP is typically a two-way connection that allows people to communicate. To the extent it offers the same or similar functions as traditional telecommunications services, or is a complement to POTS, it is ‘phone service.’”⁴⁰ Notice how broad this is. The function is identified as “two-way connection that allows people to communicate.”⁴¹ Anything that is the *same*, *similar*, or a *complement* to this function should, according to the staff, fall into the regulated “phone service” bucket. This could include Vonage, Skype, gamers using VoIP, e-mail, IM, walkie-talkies, and a conversation in the park. In order to ensure that a threat to revenue is mitigated, use of these same, similar, or complementary services would also have to be regulated in order to preserve revenue generation.

b. California

California approached VoIP policy with a curious history. First, the Public Utility Commission (“PUC”) sent letters out to VoIP service providers informing them that they were telecommunications services and must register with the State.⁴² Then the PUC held a hearing to consider whether this was in fact correct.⁴³ Finally, the PUC released an investigation to seek comment on whether this was true, tentatively confirming that VoIP service providers are telecommunications services.⁴⁴

39. *Id.* at 33. Having identified revenue as the concern and a broad Functional Approach, the staff later identifies an encyclopedia of obligations under which any identical, similar, or complementary service should fall: unbundling, universal service, certification, quality of service, tariff filings, directory listing, consumer safeguards, access charges, intercarrier compensation, interconnection, UNEs, 911, CALEA, Homeland Security, Patriot Act, and telephone numbers. *Id.* at 54–86.

40. *Id.* at 53.

41. *Id.*

42. CALIFORNIA PUC, VOIP PRESENTATION NOV. 03, slide 11 (Nov. 13, 2003), at <http://www.cpuc.ca.gov/static/industry/telco/voippresentationnov03.pdf> [hereinafter CAL. STAFF PRESENTATION]. See also Ben Charny, *California to regulate VoIP providers*, CNET News.com (Sept. 30, 2003), at <http://news.com.com/2100-7352-5084711.html>.

43. The staff presentation does not indicate that the staff made any specific recommendation to the PUC, but the presentation did note that the impact of VoIP on universal service is projected to be up to \$407 million by 2008, and that VoIP does not pay access charges, provide E911 services, provide access to traffic by law enforcement, or obtain numbers under the NANP. CAL. STAFF PRESENTATION, *supra* note 42, slide 5.

44. Order Instituting Investigation on the Commission’s Own Motion to Determine the Extent to which the Public Utility Telephone Service Known as Voice over Internet Protocol Should Be Exempted from Regulatory Requirements, *Order Instituting*

Implementing a Functional Approach,⁴⁵ the Commission tentatively concluded that “VOIP service[s] interconnected with the PSTN [Public Switched Telephone Network] are public utilities offering a telephone service subject to our regulatory authority.”⁴⁶ According to California law, a “telephone corporation” is any company “owning, controlling, operating, or managing any telephone line for compensation. . . .”⁴⁷ The California definition of “line” is expansive.⁴⁸ It includes “all conduits, ducts, poles, wires, cables, instruments, and appliances, and all other real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate communication by telephone, whether such communication is had with or without the use of transmission wires.”⁴⁹ Without specifying what aspect of a Vonage-style service falls within this definition, the Commission tentatively concluded “to the extent that a VoIP provider holds itself out to the public to offer for a fee voice telephony on a local or intrastate basis, it appears to qualify as a public utility telephone corporation in California.”⁵⁰

Like Missouri, California reviewed policy concerns which provide the rationale for any possible regulation. The Commission’s identified policy concerns and objectives were, like Missouri, threats to revenue. The Commission noted “given current VoIP penetration rates, between \$183 and \$407 million in revenue will no longer be available to support California’s five statutorily mandated universal service programs. . . .”⁵¹ The Commission also notes impact on access charges, public safety, consumer protection, and numbering resources.

Investigation (Cal. PUC, Feb. 11, 2003), at http://www.cpuc.ca.gov/published/agenda_decision/33960.htm [hereinafter *Order Instituting Investigation*].

45. *Id.* at 5. (“Our preliminary analysis suggests that similar to federal law, it is the functional nature of the service offered, not the technology used to deploy the service that determines whether a service qualifies as a public utility service under state law.”).

46. *Id.* at 4.

47. *Id.*

48. New York also has an expansive definition of a “line.” See discussion *infra* Part I.F.1.

49. CAL. PUB. UTIL. CODE § 233 (West 2005). In other words, you do not need to own, control, operate, or manage a line in plain English in order to legally “own, control, operate, or manage a line.”*Id.* A significant distinction between a Vonage-style service and ILEC services is just this point, that Vonage offers only an application service; the “line” must be acquired from some third party. To put it a different way, taken to logical completion, the real estate company that rents land to a telephone carrier is by law a “telephone company” and falls under Commission regulation.

50. *Order Instituting Investigations*, *supra* note 44, at 4–5. *But cf.* 47 U.S.C. § 153(46) (2000) (“The term ‘telecommunications service’ means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.”).

51. *Order Instituting Investigations*, *supra* note 44, at 7.

c. The Full Circle

The efforts of Missouri and California are noteworthy. The thesis of this Article is that decision makers are obsessed with policy implementation (approaches) and fail to recognize policy objectives. In both the Missouri Report and the California Investigation, the Commissions identified policy concerns (generally, a threat to revenue) and then considered how that policy ought to be implemented. These are unique cases where the question, “does the implementation produce outcomes consistent with policy objectives?” can be properly answered. If the policy objective is protection of revenue, then regulating anything that could be used as a substitute for that revenue source could be an appropriate approach/implementation.

b. *Cases-in-Controversies*

Three jurisdictions applied the Functional Approach in controversies: Minnesota, New York, and Washington. Minnesota is intriguing in that both the state commission and the federal district court applied the Functional Approach, yet yielded different outcomes—demonstrating Vonage-style fact patterns as a middle ground of regulatory instability. A New York case concerning Vonage is not included in this section because New York also employs the Technical Approach and the Market Approach and, thus, is included in the Hybrid Approach section.

i. Minnesota

A conflict in Minnesota became headline news in 2003.⁵² The Minnesota Department of Commerce filed a complaint arguing that Vonage was operating as a telecommunications service without state certification. In resolving the dispute, the Minnesota Commission presented one page of deliberations⁵³ in which it indicated that it would apply the Legal Approach.⁵⁴ This was, however, difficult, as Minnesota law did not provide

52. See, e.g., Ben Charny, *Minnesota: Phone rules apply to VoIP*, CNET News.com (Aug. 21 2003), at http://zdnet.com.com/2100-1104_2-5066652.html; Ashley Grant, *Judge: Internet phone regulation could slow Net's expansion*, USA TODAY (Oct. 17, 2003), available at http://www.usatoday.com/tech/news/techpolicy/2003-10-17-netphone-ruling-logic_x.htm; W. David Gardner, *Minnesota Judge: VoIP is Unregulated Data*, TECHWEB (Oct. 8, 2003), at <http://www.techweb.com/wire/story/TWB20031008S0017>.

53. Complaint of the Minnesota Department of Commerce Against Vonage Holding Corp Regarding Lack of Authority to Operate in Minnesota, *Order Finding Jurisdiction and Requiring Compliance*, Dkt. No. P-6214/C-03-108, at 8 (Minn. PUC Sept. 11, 2003), at <http://www.puc.state.mn.us/docs/orders/03-0108.pdf>. The order is nine pages long. Online one page is deliberation; the other pages involve history and a summary of the views of the parties.

54. *Id.* at 8 (“This is a legal issue under Minnesota law. . .”).

a definition for a “telephone service.”⁵⁵ Lacking statutory guidance, Minnesota conducted an examination of Vonage’s service and found that it is “functionally no different than any other telephone service.”⁵⁶ The Commission noted that Vonage offers unlimited calling; Vonage offers Caller ID, Call Waiting, and Voicemail; subscribers can use an ordinary touch tone phone with the Vonage service; and the Vonage service intersects with the PSTN.⁵⁷

Minnesota’s argument is that (a) there is an undefined thing known as telephone service (b) Vonage functions like telephone service (c) therefore Vonage is a telephone service. Minnesota also notes that Vonage holds itself out as, and advertises itself as, a replacement for the current phone company (a substitute service). Therefore, Minnesota directed Vonage to comply with state law as a telephone service.⁵⁸

Lacking guidance from the law on how to analyze VoIP, Minnesota provides no justification for selection of the Functional Approach.⁵⁹ It simply implements it. Minnesota’s analysis is interwoven with technical consideration for what equipment can be plugged into the network, what networks this service connects with, and what can be done with this service.

Vonage appealed the decision to federal district court which then overturned the Minnesota ruling.⁶⁰ The court likewise applied the Functional Approach, but arrived at a different result. Unlike the Commission, the court reviewed federal authority for precedent and guidance.⁶¹ Examining the FCC’s *Computer Inquiries* and the Telecommunications Act of 1996, the court concluded that Vonage’s Voice over Internet application “requires Vonage to ‘act on’ the format and

55. *Id.* at 3 (“The statute does not specifically define telephone service.”). Also note that Minnesota does not cite to the *Steven’s Report’s* or any other precedent for the Functional Approach.

56. *Id.* at 8.

57. *Id.*

58. *Id.*

59. The Commission seems to reject appeals to federal authority such as the *Steven’s Report*, stating “[i]t is not necessary for the Commission to determine whether VOIP service is a telecommunications service or an informational service under federal law, and the Commission will not do so.” *Id.* at 8.

60. *Vonage Holdings Corp. v. Minn. Pub. Utils. Comm’n*, 290 F. Supp. 2d 993 (D. Minn. 2003), available at <http://www.nysd.uscourts.gov/courtweb/pdf/D08MNXC/03-08475.pdf>, *aff’d*, 394 F.3d 568 (8th Cir. 2004). *But see* Press Release, Federal Communications Commission, FCC Finds that Vonage Not Subject to Patchwork of State Regulations Governing Telephone Companies (Nov. 9, 2004), at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-254112A1.pdf (announcing preemption of Minnesota’s jurisdiction over Vonage).

61. *Vonage*, 290 F. Supp. 2d at 997.

protocol of the information.”⁶² In applying the four criteria of the *Steven’s Report*, the court noted that Vonage’s service requires unique CPE and there is a net protocol conversion from VoIP to PSTN. Functionally, the court concluded, Vonage was providing computer-to-computer service or computer-to-phone service, but it never functionally provided phone-to-phone service.⁶³ The court went “under the hood” to look at the specific components of the service and observed that some of the components were different. Therefore, the court concluded that Vonage was an information service and Minnesota was preempted from regulating it.

The two jurisdictions came out with differing results using the same approach and the same facts. Neither jurisdiction made a direct appeal to first principles, addressing why Vonage ought or ought not fall under regulation. This is a paradigm example of the discomfort jurisdictions have with middle ground cases; the application appears to function the same, but the service provider is not the network provider and lacks significant market power. Traditional market rationale for regulation appears to be lacking, but social rationale such as 911 or CALEA could still be relevant.

ii. Dial-Around Cases

Several of the headline VoIP confrontations involved “dial-around” services. In this scenario, the subscriber dials a local access number⁶⁴ in order to access the dial-around service. After a tone, the subscriber dials the number of the individual the subscriber is seeking to reach. The call is now on the dial-around service provider’s network, who arranges to have the call transmitted long distance. At the destination, the call is placed back on a Local Exchange Carrier (“LEC”) network that services the destination’s phone number. The VoIP version of dial-around utilizes VoIP somewhere in the long distance transmission.⁶⁵

Five states have considered dial-around VoIP services; two have

62. *Id.* at 999.

63. *Id.* at 1000-01 (“Because Vonage never provides phone-to-phone IP telephony (it only provides computer-to-phone or phone-to-computer IP telephony), from a ‘functional standpoint,’ Vonage’s service is distinguishable from the scenario the FCC considered to be telecommunications services.”).

64. Dial-around services also utilize “10-10” dialing. See FEDERAL COMMUNICATIONS COMMISSION, TELECOMMUNICATIONS GLOSSARY 8 (1998), at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-247863A2.pdf.

65. *But see* Washington Exch. Carrier Ass’n v. LocalDial Corp., *Final Order Granting Motions for Summary Determination*, Dkt. No. UT-031472 at 11 (Wash. Utils. & Transp. Comm’n, June 11, 2004), at <http://www.wutc.wa.gov/rms2.nsf/> [hereinafter LocalDial]. “For a call from Seattle to Spokane or from Olympia to Bellingham, this whole process of converting the call from TDM [time-division multiplexing] to IP and back to TDM again occurs in the room at the Westin Building.” *Id.*

found that the service is a telecommunications service and three have reached no conclusion.⁶⁶ New York⁶⁷ and Washington⁶⁸ faced complaints filed by LECs that VoIP dial-around services were not certified to provide service and were failing to pay access charges. Applying the *Steven's Report* four criteria,⁶⁹ New York and Washington found: the services hold themselves out in their advertisements as telephone services;⁷⁰ they do not require the use of different CPE; the calls originate and terminate calls on the PSTN; and, no net protocol conversion takes place.⁷¹ Both states concluded that the VoIP dial-around services were functionally identical to traditional long distance service⁷² and imposed identical burdens on the PSTN as other interexchange carrier ("IXC") services.⁷³ Therefore, both states concluded that the services were telecommunications services which, specifically, owe access charges.

New York considered and concluded that the Functional Approach is the proper approach to apply, stating:

The FCC stated that this functional approach is consistent with Congress's direction that the classification of a provider should not

66. See Petition of CNM Networks, Inc. for declaratory statement that CNM's phone-to-phone IP telephony is not "telecommunications" and that CNM is not a "telecommunications company" subject to Florida Public Service Commission jurisdiction, *Order Denying Petition for Declaratory Statement*, Dkt. No. 021061-TP (Fla. Pub. Serv. Comm'n, Dec. 31, 2002), at <http://www.psc.state.fl.us/psc/dockets/index.cfm?event=transferFile&fileSize=328312&fileName=02%5C14104%2D02%5C14104%2D02%2EPDF&fileTimeStamp=01062003> [hereinafter CNM]; BEK Comm. Coop. v. SmartNET, Inc., *Notice of Hearing*, Case No. PU-2967-03-666 (N.D. PSC Jan. 28, 2004) (investigation pending), at <http://www.psc.state.nd.us/jurisdiction/pud/telecom/notices/03-666a.pdf>; Or. Exch. Carrier Ass'n v. LocalDial Corp., *Order*, Order No. 04-358 (Or. PUC June 25, 2004), at <http://www.puc.state.or.us/orders/2004ords/04%2D358.pdf> (dismissing as moot because Washington proceeding against LocalDial was resolved).

67. Compl. of Frontier Co. of Rochester Against DataNet Corp. Concerning Alleged Refusal to Pay Intrastate Carrier Access Charges, *Order Requiring Payment of Intrastate Access Charges*, Case No. 01-C-1119 (N.Y. Pub. Serv. Comm'n, May 31, 2002), at [http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/Web/4B14A963E31B14FE85256DF1007568D2/\\$File/doc11729.pdf](http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/Web/4B14A963E31B14FE85256DF1007568D2/$File/doc11729.pdf) [hereinafter DataNet].

68. LocalDial, *supra* note 66.

69. Both state jurisdictions make substantial reference to federal precedent. DataNet, *supra* note 67, at 6-9 (referring to the *Steven's Report* four criteria as a "functional approach"); LocalDial, *supra* note 66, at 19-24 (reviewing the Computer Inquiries to the more recent FCC AT&T VoIP decision).

70. See the LocalDial Web site, at <http://www.bluee5.com/localdial/> (accessed Apr. 1, 2005). "LocalDial provides unlimited long distance calling for a low flat rate. With LocalDial you can talk as long as you want, anytime you want, anywhere in the 48 continental United States. LocalDial is an easy-to-use, supplemental phone service for domestic long distance calling." *Id.*

71. DataNet, *supra* note 67, at 8.

72. *Id.*; LocalDial, *supra* note 66, at 27.

73. LocalDial, *supra* note 66, at 27.

depend on the type of facilities used. A telecommunications service is a telecommunications service regardless of whether it is provided using wireline, wireless, cable, satellite, or some other infrastructure. Its classification depends rather on the nature of the service being offered to customers.⁷⁴

The affirmation of the Functional Approach is achieved by reference to congressional intent. Of course, the congressional intent here is a negative postulation: policy outcome should *not* depend on facility type. Okay, this begs the question of what it *should* depend upon; the congressional intent cited does not inform us.

The dial-around cases are fringe cases that do not cause much policy consternation. The Functional Approach and the Market Approach are in alignment. Functionally, VoIP dial services are largely indistinguishable from other dial-around services. In terms of the market, the entrance of the VoIP dial-around services causes no alteration in the competitive market, and neither the current players nor the entrants exhibit significant market power. In these easy-question cases, one would not expect the decision maker to exhibit anxiety concerning the proper approach, leading to a rigorous review of policy and approaches. All analytical roads lead to the same destination.

3. The Functional Approach Observations

The above examples of states' utilization of the Functional Approach lead to the following observations.

a. *Legal Precedent*

The Functional Approach provides a degree of assurance. This is an approach articulated by the FCC developed out of the precedent of the *Computer Inquiries* and court cases discerning the definition of a "telecommunications carrier." A state would feel a degree of comfort applying quality precedent. This approach produces a definitive answer. The state might hope reliance on such precedent will substantiate its decision against appeal (this has, however, not been the case).

b. *Function versus Under-the-Hood*

Different applications of the Functional Approach reveal a tension over what is meant by the Functional Approach. As presented by the *Steven's Report*, the decision maker looks under the hood at the technical components of the service. But this seems contrary to advocacy of the Functional Approach as an alternative to the Technical Approach. The

74. DataNet, *supra* note 67, at 7.

Functional Approach is said to resolve policy outcomes based on functionality and not the components under the hood that produced that functionality. Indeed, some of the states' arguments seem to pick up on this and stay high at the functionality level. Most others do not. Of course, the danger of a high functional analysis is that it may capture things (such as Voice over Instant Messaging) that may or may not be desired to be included.

c. Circular Justification

Some advocates of the Functional Approach are seen to justify their approach in a circular or self-referential manner. In response to the question, "why is the Functional Approach correct?" the answer is given, "because like things should be regulated the same." The Functional Approach is "like things should be regulated the same"; yet the rationale presented is likewise "like things should be regulated the same." The rationale for the approach is identical to the approach itself. This does not get us too far.

What is lacking is a reference to first principles; *why* should the regulation exist. What are the policy concerns and objectives?

The Functional Approach does not justify its criteria (nor should it be expected to). A criterion of the FCC's Functional Approach is whether a service uses new or unique CPE. What difference should this make? If the phone functions in all manners the same, but there is some mystery black box in the middle, why should this change things? What about mobile phones, Time Warner Cable Information Service ("TWCIS") phones over coax cable, or Integrated Services Digital Network ("ISDN") Phones? The CPE varies; so does policy outcome. CPE acts (sort of) as a demarcation point along the border between phones with policy concerns and phones lacking those policy concerns. But the presence or absence of the CPE itself does not enlighten us as to what the policy concern is. The rationale for different policy outcomes emanates from elsewhere.

To be clear, this is not a fault or a criticism. This is to clarify and distinguish policy from approach. Approaches implement policy; they are not the policy itself. To understand the "why," one must go beyond the "how."

C. The Technical Approach

The Functional Approach is regularly juxtaposed against a mythical Technical Approach.⁷⁵ The Technical Approach is described as an "under-

75. See, e.g., Order Instituting Investigation, *supra* note 44, at 5 ("Our preliminary analysis suggests that similar to federal law, it is the functional nature of the service offered,

the-hood”⁷⁶ approach where the analysis looks specifically at a single component in order to determine policy outcome (in the case of VoIP, whether VoIP is present). The Technical Approach is caricatured as fundamentally flawed. Why should policy favor a particular technology, the argument goes.

There are a few problems. First, the alternative, the Functional Approach, is a Technical Approach as well. The difference is a finger count of the number of components considered. The selection of the one or the several *salient* components would appear to be equally arbitrary or artificial in either approach. Second, no jurisdiction embraces the mythological Technical Approach. There is essentially no jurisdiction which has identified VoIP as a single favored component that determines policy outcome. Finally, the argument “why should policy outcome be based on a technology” confuses implementation with objectives.

Approaches implement policy objectives using artificial frameworks. Why not base the approach on technology? Base it on whatever you like. All approaches are artificial. It is necessary to identify some marker between those things covered by a policy and those not. As long as the outcome is consistent with the objectives, the approach is valid. However, basing *an approach* on technology is not the same as, and should not be confused with, basing *a policy* on technology.

1. Florida

The one exception emanates out of an odd history in Florida. Florida was confronted with a VoIP dial-around service that was of the belief that it did not owe access charges. It petitioned the Florida Public Utility Commission (“PUC”) for a declaratory ruling. Florida dismissed the petition on the grounds that such a proceeding would establish broad-reaching VoIP policy and therefore should not be resolved in a declaratory ruling.⁷⁷ The PUC directed its staff to hold hearings on the subject, but before the PUC could act, the legislature closed down the discussion with a broad declaration that “the provision of voice-over-internet protocol (VOIP) free of unnecessary regulation, regardless of the provider, is in the public interest.”⁷⁸ This legislation looks under the hood and if the single-component VoIP is present, that component seems to determine policy outcome.

not the technology used to deploy the service that determines whether a service qualifies as a public utility service under state law.”); MOPSC VOIP REPORT, *supra* note 36, at 1 (noting technical distinction and dismissing it as trivial).

76. Testimony of Stan Wise, *supra* note 34.

77. CNM, *supra* note 67.

78. FLA. STAT. ANN. § 364.01(3) (West Supp. 2005).

D. The Layered Model of Regulation

The Layered Model of Regulation is presented as a dramatic alternative to the Functional Approach.⁷⁹ The argument is that instead of pursuing an analysis of the technical characteristics of a service, the Layered Model separates distinct areas of policy concern. The Layered Model divides the policy landscape into (1) physical network, (2) logical or computer networks, (3) applications, and (4) content.⁸⁰

In terms of communications policy, classical policy concerns addressed market power. AT&T became a government-sanctioned monopoly and thereby had market power. Computer network services lack market power⁸¹ and are dependent upon physical network services, such as AT&T, that have the ability and the incentive to take advantage of market power to the detriment of the computer network services market. The Layered Model has been applied to this to distinguish the market power of physical networks and their relationship to computer networks services, application services, and content. Notice here that the layers are markets, layered upon one another, and policy outcome is based upon the way those markets interact. While the FCC has never adopted the Layered Model of Regulation, the *Computer Inquiry* policy would appear to track this framework.⁸²

79. See, e.g., Douglas C. Sicker, *Further Defining a Layered Model for Telecommunications Policy*, Telecommunications Policy Research Conference (2002), at <http://intel.si.umich.edu/tprc/archive-search-abstract.cfm?PaperID=95>; Kevin Werbach, *A Layered Model for Internet Policy*, 1 J. TELECOMM. & HIGH TECH. L. 37 (2002); Robert M. Entman, Rapporteur, *Transition to an IP Environment*, THE ASPEN INSTITUTE (2001), at <http://www.ciaonet.org/wps/enr04/enr04.pdf>.

80. The Layered Model of Regulation should not be confused with the layers of the Internet stack or of the Open Systems Interconnection ("OSI") stack. While there may be similarities—or perhaps inspirations—the Layered Model is a division along recognized zones of policy concerns. The advocates of the Layered Model argue that implementation of this model facilitates recognition that, for example, market policy concerns of the physical network services layer do not necessarily apply to the applications services layer. Likewise, intellectual property concerns of the content layer are perhaps best dealt with at the content layer and not at the physical network layer.

81. *Computer I* concluded that as the computer market was competitive, regulation is not merited:

Applying these standards to the record before us we conclude that the offering of data processing services is essentially competitive and that, except to the limited extent hereinafter set forth, there is no public interest requirement for regulation by government of such activities. Thus, there is ample evidence that data processing services of all kinds are becoming available in larger volume and that there are no natural or economic barriers to free entry into the market for these services. The number of data processing bureaus, time sharing systems, and specialized information services is steadily increasing and there are no indications that any of these markets are threatened with monopolization.

Computer I Tentative Decision, *supra* note 10, para. 20.

82. See Robert Cannon, *The Legacy of the Federal Communication Commission's*

While the Layered Model is presented as an extreme alternative to the Functional Approach, it is not as different as it might seem. Both approaches are artificial implementations of policy objectives. Both are implemented through technical criteria, although the two have different technical perspectives of the same horse. The true superiority of one approach over the other should be determined not on some innate nature of the approach, but whether the approach successfully produces outcomes consistent with policy objectives.

Few jurisdictions have declared that they embrace the Layered Model. However, a number of jurisdictions implicitly follow the model, making a distinction between physical network and applications. This distinction recognizes the uncoupling of the voice application from the physical network. This uncoupling removes the voice application from the physical network market where the company can use network market power to influence the application market. It places the voice application in a competitive market that is more akin to the e-mail services market than the telephone network market.

1. Colorado

Colorado was confronted by a city with a troubled conscience. The City of Cortez constructed a fiber optic network known as the Cortez Community Network ("CCN"). This network received local transmissions from Qwest, aggregated them, and then transported them to other places, including Denver (potentially intrastate long distance). The City of Cortez did not itself offer voice services, but was of the conviction that some of its customers might be tempted. Therefore, the City of Cortez modified its Acceptable Use Policy to require tempted customers to receive certification prior to using VoIP. The city then sought dispensation from the Commission that CCN did not itself require certification.⁸³

The Colorado Commission concluded that CCN is a private digital line offering and not within its jurisdiction. The petition for a declaratory ruling that CCN did not need certification for possible third party voice services was therefore granted.⁸⁴

This Colorado case is a fascinating inverse confrontation. Normally

Computer Inquiries, 55 FED. COMM. L.J. 167 (2003), available at <http://law.indiana.edu/fclj/pubs/v55/no2/cannon.pdf>.

83. The Petition of The City of Cortez, Colo., A Colo. Mun. Corp. And A Home Rule City, For A Decl. Order that Certain Data Comm. Servs. Provided by The City Do Not Need Certificates Provided by The Comm'n, *Order Granting Petition For Declaratory Order*, Dkt. No. 03D-072T (Colo. PUC May 21, 2003), at http://www.dora.state.co.us/puc/decisions/2003/C03-0651_03D-072T.doc.

84. *Id.* at para 4.

the physical network is a regulated carrier, and the question is whether an application service should also be regulated. In this case, the physical network is not a regulated carrier regardless of the status of the applications service, with the Commission distinguishing between the physical network and applications. The PUC concludes with a curious statement:

In addition, the City's representation that it will not permit providers that are uncertified (by the Commission) to use the CCN to offer VOIP services persuades us that its ownership and operation of the CCN is not subject to our jurisdiction.⁸⁵

Does this mean that the PUC is envisioning regulated telephony application services over a non-regulated physical network? Alternatively, is the Commission saying that something has to be regulated? If the application is regulated, then does the network need not be? But if the application is not regulated, then does the physical network need to be (the non-regulation of CCN is conditioned upon the regulation of any possible voice service)? The Commission's decision is a short four paragraphs and does not expound on rationale so much as it disposes of what appears to be a simple case. The decision reveals a perception of network and applications as distinct, but seems to muddle the implications of those distinctions.

2. Guam

A policy dispute in Guam constitutes a fascinating historical throwback. To appreciate this story, one must recall the time prior to divestiture when AT&T was permitted only to offer basic telecommunications services and was prohibited from offering information services.⁸⁶ To a company prohibited from offering information services, everything looks like a basic service.

The Guam Telephone Authority ("GTA") is a statutorily created telephone service. The GTA charter limits it to the provision of telephone service.⁸⁷ GTA thought it would be a good idea to offer Internet service. Private Guam communications companies disagreed—and filed for an injunction.⁸⁸ GTA argued that the provision of Internet access was within its authority, in other words, that Internet access is a telephone service.

The Guam Supreme Court disagreed,⁸⁹ making a distinction between

85. *Id.*

86. See *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States*, 460 U.S. 1001 (1983), *vacated sub nom. United States v. W. Elec. Co.*, 2 Comm. Reg. (P & F) 1388 (D.D.C. 1996).

87. *Carlson v. Guam Telephone Auth.*, 2002 Guam 15, para. 9 (Sept. 6, 2002), available at <http://teamsupreme.temp.powweb.com/op2002Guam15.htm>.

88. *Id.* para. 2.

89. See *Guamtel Injunction*, at <http://www.guamtel.net/injunction.html> (last visited Apr. 20, 2005) (stating that "[a]lthough disappointed with the ruling, GTA will abide by the

telephone service as “two-way communications of speech” and the Internet, which is “two-way communication of data.”⁹⁰ The court anticipated that individuals could use telephony applications over the Internet, but drew a distinction between Internet access service and applications. The issue before the court was not potential applications and not the underlying physical network; the issue was GTA’s offering of Internet access service. The fact that VoIP applications exist does not make the Internet access service itself a telecommunication service. “The access provided by the ISP and the platform for placing a voice call are too independent to render the former the equivalent of the latter.”⁹¹ The court concluded that, as Internet access service is not a telephone service, GTA had exceeded its authority and the service was enjoined; the fact that users could acquire third party VoIP applications did not alter this outcome.⁹²

In this case, the court recognized as distinct the telephone network, a computer network (a.k.a. the Internet), and applications. According to the court, the regulatory classification of one does not implicate the regulatory classification of another. It is not quite a Layered Model, but the court perceived application, Internet, and physical network as separate things.

The court also rejected a broad Functional Approach such as the one articulated by Missouri in which a service that is the same as, similar to, or a complement to “a two-way connection that allows people to communicate” is a “phone service.”⁹³ Simply because something is functionally a substitute for something else, does not make it that something else.

Certain types of data transmission services have been characterized as supplementing telephone service, such as one-way paging systems. The nexus between these types of services and ordinary telephone service is readily apparent. By contrast, internet access and internet use is not logically or inherently seen as supplementing ordinary telephone service. While it cannot be doubted that internet access allows for communication which conveniently substitutes or replaces telephonic communication (such as electronic mail), this is distinct from a service which supplements or works in conjunction with telephone service. Internet access service allows for a type of transmission of data and information that is by-and-large unrelated to ordinary telephone

Court’s order.”)

90. *Carlson*, 2002 Guam 15, at para. 41. The court acknowledged that the term “telephone service” is undefined in the Guam statute. It proceeded to review, but then rejected federal precedent. “[W]e do not find the distinctions made in the 1996 Act to be determinative in the instant context. . . . we must conduct an independent analysis of the scope of the term ‘telephone services’ in 12 GCA § 7104(a).” *Id.* para. 33.

91. *Id.* para. 41.

92. *Id.* para. 42.

93. MoPSC VoIP Report, *supra* note 36, at 53.

service, and therefore does not supplement such service.⁹⁴

Mere similarity in function is insufficient, according to the Guam court.⁹⁵

3. Layered Model Observations

While advocates of the Functional Approach see an outcome where a phone is a phone, and Vonage is just like Verizon, advocates of the Layered Model will scratch their heads. Advocates of the Layered Model may look at the Functional Approach and conclude that there should be little difference in the outcome between the two approaches if the Functional Approach were applied properly.

The Functional Approach, as currently implemented, compares application to application. However, when contrasting Verizon to Vonage, that is not complete. The functionality sold by Verizon is physical network transport coupled with application. The functionality sold by Vonage is just the application. Given the relative significance of physical network transport, and the historic concern that the physical network is where market power exists, the Functional Approach advocates fail to provide a rationale for selectively disregarding the physical network. Functionally, Verizon and Vonage are not the same.

E. Market Principles

There are a few instances where the states have made direct appeal to first principles, policy concern over markets, without discussions of implementations. These generally involve situations that are not case-in-controversies where Commissions were free to pontificate on the desired construction of VoIP policy. Both instances cited below reference the Nascent Services doctrine.⁹⁶

1. Colorado

At the end of 2003, Colorado closed a year-long investigation of VoIP citing the FCC's announced VoIP proceeding as the rationale.⁹⁷ The

94. *Carlson*, 2002 Guam 15, at para. 43 (citations omitted).

95. Nevertheless, the court's argument here too seems Platonic. A broad Functional Approach is rejected, not because it fails to implement good policy, but because by the nature of the things themselves, the broad Functional Approach does not appear coherent. Why is Internet access not the functional equivalent to telephone service? Because it is "by-and-large unrelated to ordinary telephone service." *Id.*

96. See Commissioner Kathleen Q. Abernathy, *The Nascent Services Doctrine*, Remarks Before the Federal Communications Bar Association New York Chapter (July 11, 2002), at <http://www.fcc.gov/Speeches/Abernathy/2002/spkqa217.html>.

97. The Investigation Into Voice Over Internet Protocol (VOIP) Services, *Order Closing Docket, Dkt. No. 03M-220T* (Colo. PUC Dec. 17, 2003), at http://www.dora.state.co.us/puc/decisions/2004/C04-0004_03M-220T.doc.

Chairman of the Commission's concurrence articulated his views concerning the inapplicability of legacy market regulation on new VoIP services:

Despite the efforts of some states, it is my view that VoIP should not be regulated like traditional telephone service. Existing regulations—including rate caps, tariff filings, and service quality obligations—were promulgated to police the behavior of monopoly telephone providers. It makes no sense to impose price or service quality controls on fledgling competitors who will get few customers if they offer high prices or bad service quality.

We should not doom a nascent competitive industry via regulatory overkill. If there is an attempt at heavy-handed regulation, those companies who obey—by paying taxes, subsidies, and intercarrier charges—will quickly be undercut by a netherworld of entrepreneurs who do not. Companies who do not obey will locate in more friendly states or, failing that, other countries.⁹⁸

Chairman Sopkin articulated his vision of policy goals and objectives. He did not articulate his vision of an approach in order to implement that policy.

2. Pennsylvania

The Pennsylvania PUC initiated an investigation in May 2003⁹⁹ with general articulations of VoIP, but also pointing specifically to the advent of Vonage as an impetus for the proceeding. Pennsylvania indicated that it was merely seeking to inform its judgment, stating “[a]s a threshold matter, this Commission must decide whether we have jurisdiction to regulate VoIP service in this Commonwealth, and if jurisdiction exists, whether we should exercise it.”¹⁰⁰

One year later, Pennsylvania declared that it would not take regulatory action, instead deferring to the FCC's IP Enabled Services Proceeding.¹⁰¹ This was achieved by a Commissioner's motion of “no action”; it did not in fact close the investigation and did say that PUC staff would continue to monitor VoIP.

If regulation is too oppressive while a technology is still developing, it could result in a dampening of the introduction or growth of that technology. Although there are instances where regulatory intervention

98. *Id.* paras. 6–7 (Gregory E. Sopkin, Chairman, concurring statement).

99. Investigation into Voice over Internet Protocol as a Jurisdictional Service, *Order*, Dkt. No. M-00031707 (Pa. PUC May 30, 2003), at <http://www.pabulletin.com/secure/data/vol33/33-20/965.html>.

100. *Id.* at 1.

101. Investigation into Voice over Internet Protocol as a Jurisdictional Service, *Motion of Commissioner Glen R. Thomas*, Dkt. No. M-00031707 (Pa. PUC Apr. 15, 2004), at <http://www.puc.paonline.com/PcDocs/466305.doc>.

is proper (such as market failure or consumer abuse), regulatory restraint is more prudent until such time as the technology is understood and viable.¹⁰²

Commissioner Thomas also took note of the pending FCC IP Enabled Services Proceeding, which may clarify VoIP policy and the need for the Commission to further understand the VoIP services prior to regulation. Much like Colorado, Pennsylvania Commissioner Thomas is articulating clear ruminations concerning policy directions prior to attempting to construct a policy framework.

F. Hybrid Approaches

Neat academic distinctions between approaches are not the same as real-world decision making. Some jurisdictions mix approaches, seemingly selecting the approach of the moment that will produce the desired outcome. Generally the mixing is mild. In one instance, New York toured through approaches grappling for a way to resolve the regulatory status of Vonage.

1. New York: Vonage

A New York ILEC, Frontier Communications, brought a complaint against Vonage arguing that Vonage is a telecommunications service operating without authority and specifically alleged that Vonage “is providing an unsafe and inadequate implementation of 911 calling. . . .”¹⁰³ The New York Commission’s decision resolving the complaint identified reliable 911 service as the policy objective,¹⁰⁴ and then applied various approaches in order to achieve that policy objective with an implementation that also recognizes the lack of market concerns.

In order to determine if Vonage is subject to state regulation, New York applied a Technical Approach. Disregarding the early decision of the Minnesota federal court,¹⁰⁵ the New York Commission found that Vonage

102. *Id.* at 2.

103. Complaint of Frontier Company of Rochester, Inc. Against Vonage Holdings Corp. Concerning Provision of Local Exchange and Interexchange Telephone Serv. in New York State in Violation of the Public Service Law, *Complaint* (N.Y. PSC Sept. 10, 2003), available at <http://www.frontieronline.com/pdf/VonageComplaint.pdf>.

104. Complaint of Frontier Telephone of Rochester, Inc. Against Vonage Holdings Corp. Concerning Provision of Local Exchange and InterExchange Telephone Serv. in New York State in Violation of the Public Service Law, *Order Establishing Balanced Regulatory Framework for Vonage Holding Corporation*, Case No. 03-C-1285 at 15 (N.Y. Pub. Serv. Comm’n May 21, 2004), at [http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/Web/C03561B8303FD80885256E9B004F8806/\\$File/03c1285.pdf?OpenElement](http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/Web/C03561B8303FD80885256E9B004F8806/$File/03c1285.pdf?OpenElement) [hereinafter Vonage Holding Corp. Order].

105. See discussion *supra* Part I.B.2.b.i.

is a telecommunications service subject to state regulation. Under New York state law, a “telephone corporation” is defined as

“every corporation . . . owning, operating or managing any telephone *line* or part of telephone line used in the conduct of the business of affording telephonic communication for hire.”¹⁰⁶

Although one might expect a “line” to be defined essentially as the wire over which communications occur,¹⁰⁷ New York defined a “line” as including:

receivers, transmitters, instruments, machines, appliances and all devices, . . . apparatus, property and routes used, operated or owned by any telephone corporation to facilitate the business of affording telephonic communication. . . .¹⁰⁸

In other words, a “line” could be the electronics at the end of a wire, even where the electronics are independent of the wire. As Vonage owns a media gateway, this constituted “owning a line” to New York, and therefore Vonage is a telephone company under state law.¹⁰⁹ This is an examination under the hood for a particular component. If that component exists, it determines policy outcomes. In this case, the magic component is a media gateway.

In order to determine whether New York was preempted by federal jurisdiction, New York applied a Functional Approach. Citing the definition of “telecommunications service” and “information service” in the Telecommunications Act of 1996, and the FCC’s analysis in the *Steven’s Report*, New York concluded that there is no change in form or content of the conversation, no ability to interact with or manage stored data, and no net protocol conversion.¹¹⁰

In order to determine what regulations should now apply, the Commission applied Market Principles.

As Vonage is a relatively small competitive provider of local exchange and interexchange services, it should be subject to, at most, the same limited regulatory regime to which comparable circuit switched competitive carriers are currently subject in New York. However, because we recognize the potential impact of this emerging technology on facilities-

106. N.Y. Pub. Serv. Law § 2(17) (Consol. 2004) (emphasis added).

107. *But cf.* NAT’L COMM. SYS. TECH. & STANDARDS DIV., GENERAL SERVS. ADMIN., TELECOMMUNICATIONS: GLOSSARY OF TELECOMMUNICATIONS TERMS FED STD 1037C (1996), at <http://glossary.its.bldrdoc.gov/fs-1037/>. (“line: 1. A physical medium for transferring electrical or electromagnetic energy from one point to another for purposes of communications. (188) 2. A land line. 3. A metallic medium used for the transmission of electrical power.”).

108. N.Y. Pub. Serv. Law § 2(18) (Consol. 2004).

109. Vonage Holding Corp. Order, *supra* note 106, at 10.

110. *Id.* at 12.

based competition, we will move cautiously, so as not to hinder its development. Consequently, the company may seek permanent or temporary waivers of any of those requirements it deems to be inappropriate in its circumstance or with which it is not readily able to comply.¹¹¹

New York concludes that while it must regulate Vonage, this regulation should be appropriate and minimal.

New York goes from Technical Approach to Functional Approach and finally to Market Principles. The identified concern that New York grapples with is reliable 911 service. It's not going to get that one identified concern unless it sticks Vonage under the whole regulatory regime. Having done so, it seeks to back Vonage out of the regime as far as possible based on market principles. Competing policy principles are contending for outcome; New York seeks to achieve these policy goals by an uncomfortable eclectic tour through approaches.¹¹²

II. OBSERVATIONS

Having completed a survey of state VoIP precedent, this part of the project seeks to sort the different approaches and analyze results. This led to an examination of the differing policy implementations, whether policy objectives were considered, and whether the implementation met policy objectives. The question in this review is not, what are the proper policy objectives, but whether jurisdictions are engaging a process that will produce coherent policy.

A. *The Muddled Process: Goals First*

Automatic implementation of established approaches will not necessarily produce results consistent with policy goals and objectives. In new situations, decision makers need to return to first principles. Critiquing the viability of approaches is incoherent until one knows what policy the approach seeks to implement. If the first principle is market power, then companies lacking market power fall outside the scope. If the first principle is protection of revenue, then regulating alternative services might ensure that revenue is collected regardless of the service utilized. Whether an

111. *Id.* at 17.

112. Once again, a federal district court was unpersuaded that the PSC had authority to regulate Vonage. On June 30, 2004, a federal district court temporarily enjoined enforcement of New York's decision. The court set the date for the hearing on the permanent injunction in January 2005, leaving ample opportunity for the FCC or Congress to resolve the issue and take it out of the hands of the court. *See* Ben Charny, *Vonage beats back New York ruling*, CNET News.com, Jun. 30, 2004, at http://zdnet.com.com/2100-1103_2-5253841.html.

approach is the proper framework cannot be divined until first principles are resolved.

B. Approaches Are Artificial Frameworks

An approach is an artificial framework implemented to identify that which falls within a policy and that which does not. The demarcation points along the borders provide the utility of distinguishing one side of the border from the other. These demarcation points, however, do not reveal why they are where they are. It matters not what these demarcation points are, as long as they successfully implement policy. The demarcation points are not to be confused with the policy itself: they are not what the policy is based upon, rather they are how the policy is implemented.

C. Market versus Social Concerns

Policy objectives motivating telecommunications regulation can be divided into two groups: market and social concerns. Classical regulatory concerns have addressed telecommunication utility monopolies and their position in the market. It concerned the provision of service by the monopoly to consumers and to potential competitors in other markets, and the entrance of monopolies into other markets (i.e., CPE retail sale, computer sale, and enhanced services). As time went on, social concerns also became regulatory mandates. These concerns included wiretap authority, access by individuals with disabilities, and 911 service. The set of regulatees who fell within the scope of market concerns happened to be the same set of regulatees who fell within the scope of social concerns.

The review of state VoIP precedent reveals an evolution in policy concerns. Social concerns continue to be an underlying justification for regulation while market concerns have diminished. In situations where states articulated policy objectives, they articulated social concerns. New York identified reliable 911 service. California and Missouri identified universal service. Other concerns have included consumer protections. However, nowhere in the articulated policy concerns is there discussion of market power, market entrance, or anti-competitive behavior. These traditional policy objectives that were the primary principles initiating this regulatory path appear lacking from current discussions.

D. On-Off Switches

The distinction between social concerns and market concerns, and regulatory history where those regulatees which fell under social concerns and those regulatees that fell under market concerns were the same, has led to a modern conundrum. Those two sets no longer remain synonymous.

Social policy may remain a concern when market policy is not. However, as history did not distinguish the two sets of concerns, a decision maker is faced with a dilemma of an On-Off Switch. Either an entity in question is regulated (On Switch) or it is not (Off Switch).

Decision makers generally lack the ability to regulate for certain purposes and not others. Regulation of telecommunications services currently encompasses a wide range of concerns. If the decision maker identifies only one obligation as absolutely necessary and in the public interest, the decision maker is obligated to impose the entire framework to achieve it.¹¹³ If the decision maker wants to turn the switch to the Off position, all regulatory concerns must first be satisfied. This creates a dilemma where the decision maker has limited leeway in designing regulatory solutions in a new environment.

E. Talking Past Each Other

The On-Off Switch creates a dialogue in which the participants are talking past each other. Those advocates who focus on market power contend that regulation is not needed. Those advocates who focus on social concerns contend that regulation is needed. However, generally no one is arguing that market concerns justify further regulation, and no one is arguing that social concerns need not be satisfied.

In other words, there is general agreement on policy. Market concerns do not justify regulation; social concerns should be satisfied (and may require regulation). Yet even though there exists rough consensus on policy objectives, there is dramatic division in approach due to the On-Off Switch. The half full glass is neither empty nor full, yet it must be one or the other.

As a result, the two sets of advocates talk past each other: they advocate opposing positions, yet lack opposing policy objectives. Partly, this is a product of the dilemma of the On-Off Switch. Partly it is the product of a muddled discussion which confuses implementation/approaches with policy objectives.

III. CONCLUSION

A refrain in policy rhetoric is, “why should policy be based on technology?” Decision makers are religiously warned against the evils of technologically biased policy. This line of rhetoric, however, confuses implementation with policy. Rarely can an instance be found where the

113. This situation was seen in New York where the Commission identified reliable 911 service as a compelling concern, turned the regulatory switch on, but then tried using alternative analysis to back out of further regulation of VoIP providers. *See supra* note 106 and accompanying text.

policy of a jurisdiction is that the existence of a particular technology is the rationale for policy outcome.

At some point in the beginning of policy time, a policy creator ponders existence and resolves that action is needed. Policy objectives and goals are conceived. Having determined *why* the decision maker might act, the decision maker then ponders *how* to act. The regulator constructs an artificial framework to implement the goals and objectives. It is one thing to say “communications service providers with market power must be regulated in order to ensure proper delivery of service and to thwart anti-competitive behavior by the service provider in other markets.” It is another thing to articulate the boundary between the provider with market power and other service providers. How do I know that I have a horse and not an elephant? The technical description that answers this question is not itself the reason “why” the policy exists in the first place.

The process by which policy is created has been misplaced. Decision makers have existed for so long in the context of implementation that implementation has been confused with policy. State precedent above demonstrates the tension of applying a legacy approach, but not being able to make sense out of novel outcomes. Other examples demonstrate the circularity of justifying an approach by the approach. Other examples demonstrate how one must move beyond contrasting one approach to another without reference to policy objectives.

In a few examples, states articulated policy concerns and implemented approaches consistent with those objectives. The appropriateness of the policy concerns might be called into question, but the question now is properly framed as: Are the identified policy goals, objectives, and concerns appropriate; not whether it is inherently superior to examine the horse by its teeth, by its function, or its layers