

Summary and Analysis of the FCC's November, 2011 Universal Service and Intercarrier Compensation Order

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War and Peace. Moby Dick. A Game of Thrones. These are all long books. The FCC's recent Report and Order and Further Notice of Proposed Rulemaking (FNPRM) on the topics of Universal Service and Intercarrier Compensation is a new member of that family, weighing in at 751 pages. But it's not such an entertaining read. Released the Friday before Thanksgiving, about a month after it had been formally adopted, this weighty Order should be the culmination of ten to fifteen years of effort to reform two of the FCC's stickiest issues.

Amazingly, it doesn't even come close to finishing the job. Like *Harry Potter V*, it is perhaps overlong, but just another episode in an ongoing series. It does make substantial modifications to the universal service fund, and points to a new direction in intercarrier compensation, but FCC Chairman Julius Genachowski's characterization of the effort as being 25 miles into a marathon is perhaps more than a bit optimistic. I happen to live near the beginning of The Boston's Heartbreak Hill, and the TV helicopters aren't even in sight yet. While much was ordered, the Further Notice is itself a dense 105 pages long. Many of the trickiest issues have been kicked down the road. I also fear that because the reform is being decided on piecemeal, the final pieces may not all fit together very well. We can only hope.

Universal Service has been on the FCC's table since the Universal Service Fund was created by the Telecom Act of 1996, replacing implicit subsidies with an explicit mechanism, funded by a tax on interstate telecommunications services. Intercarrier compensation has never really been a settled issue; the current Docket has been open since April, 2001, and has been open to about half a dozen rounds of Comments so far. So one should not accuse the Commission of acting hastily.

They do, however, illustrate the problem of attempting to tackle a difficult problem without a clear understanding or big-picture vision. Instead of creating a clean framework, they continue to piece together grand compromises that fit together like the Cadillac in the Johnny Cash hit, *One Piece at a Time*. An executive summary was released when the Order was adopted, but it was too vague for me to feel comfortable reporting on it. I thus took the time to slog through the whole thing, taking notes along the way. I will note that there is much in this Order that is potentially good, and much that could have been far, far worse. They did make an effort to move in the right direction. It just came out more convoluted than necessary.

And a few real "gems" require careful attention, including some proposals to literally abolish the Internet as we know it, and replace it with a regulated public packet data network that will simply be named "The Internet". Most ISPs, for instance, would never bother to look at PSTN Intercarrier Compensation, since it doesn't affect them. But under some options discussed in the FNPRM, it certainly does. The power grab being discussed here is breathtaking. The Internet uses IP. The PSTN uses IP. Sometimes PSTN traffic traverses the Internet. They think this gives them the power to regulate all IP traffic, PSTN or not, including voice and other applications. So companies and organizations who had no interest in this material might find it useful to pay attention now. Notice has been given. I expect to Comment further.

I should also point out that litigation over the Order itself has already begun. The first two appeals to reach me have come from Core Communications and the Commonwealth of Pennsylvania. They're boilerplate claims of "capricious" rulemaking, though the Pennsylvania one cites improper preemption of state authority. So the FCC will again have to face often-skeptical appellate judges.

Now to the details, section by section. I will address the Order first, then the FNPRM. Here are the highlights, or at least the key details that I found most significant to competitive service providers. In case it isn't obvious, I am not of the "j-school" view that opinions should be totally separated from reportage, so my personal opinions are liberally interspersed below.

Universal Service Order: "Connect America Fund"

It's especially important to begin with some good news, noting what is *not* in the order. The funding mechanism for USF was not radically changed. It remains a tax on interstate telecommunications. Earlier proposals to implement monthly taxes on telephone numbers were abandoned. This was probably the biggest single red-flag issue in the 2008 proceedings that led to the creation of our multi-CLEC Comment group, the Coalition for Rational Universal Service and Intercarrier Reform (CRUSIR), in whose name I filed several rounds of Comments and Reply Comments. Our Comments in this round were noted in several footnotes, for both USF and ICC, and some of our ideas were taken seriously.

Cap on fund size. The overriding goal of the FCC's reforms here is to limit the growth of the high cost fund (HCF), capping it at \$4.5 billion. This is near current levels. Previously, HCF had been a blank check for many carriers. In the future, it will be subject to much closer scrutiny. That is a very positive move, intended to keep the tax rate from going above the current 15.3%.

The High Cost Fund is now called the *Connect America Fund* (CAF). This is supposed to reflect its transition from supporting only voice service to supporting "broadband" service. The change is less substantial than it sounds. The old HCF only supported voice services, but it allowed the voice services to be rendered over costly broadband-capable plant, even ultra-costly Fiber to the Ranch, not limited to the least-costly voice-capable plant. CAF, in contrast, has explicit broadband requirements, but recipients must still provide "voice telephony". So it's now a jelly and peanut butter sandwich, not the opposite.

USF rules are totally different for the two different types of ILECs. Price Cap Carriers (PCCs) are the large ones, including the Bells, and most of Frontier, Fairpoint, and Windstream. They are allowed to earn any rate of return, so long as their FCC-tariffed (access) rates are held to a capped level, usually based on 1992 norms as revised by the 2000 CALLS plan. Rate of Return (RoR) Carriers are the small rural ones whose rates are still set the traditional way. They are almost to a one dependent upon USF for funding, as their costs are usually well above their retail rates. This has given them no incentive to operate economically. The fund is capped at \$2B/year for PCCs, and their subsidized retail rates are expected to rise to two standard deviations above the urban mean rate (they're usually much lower today). These carriers also get higher intercarrier compensation than the PCCs, which is why the two subjects are inseparable. Lower ICC rates leave more to be covered by USF.

PCC CAF Phase I broadband support. The goal is to have 100% coverage of PCC service areas with broadband available within a few years. Since PCCs tend to have low-cost service areas, they've had little incentive to build out broadband in their mostly-rural high-cost corners. So there will be a Phase I in

2012 in which the PCCs will be offered \$775/subscriber to provide broadband service to subscribers who are currently “unserved”. The minimum supported speed is 4 Mbps down, 1 Mbps up, though there may be waivers for existing slower systems. The ILEC has three years to complete buildout. It can’t get CAF for areas it had earlier planned to build out anyway, or had committed to build out to as part of a merger commitment.

If there is an unsubsidized competitor (i.e., cable or WISP) providing broadband service to an area, then it is not eligible for CAF. Such service should, however, include voice as well as data. So WISPs may want to look into getting voice services (this could be VoIP with local numbers) onto their networks *mach schnell*. The Phase I deadline is not clear but for the PCC to get the subsidy, it must be unserved on the National Broadband Map *and* the ILEC must attest that it knows that there is no service there, when it makes the request. This probably gives WISPs a few months from now to build out. In Phase I, the unsubsidized service need merely be 768k/200k. The ILEC is then allowed to determine how many unserved new customers it wants to serve for the one-time \$775 payment, with the fund capped at \$300M.

PCC Phase II. Since Phase I doesn’t reach everyone, Phase II, which covers 2013-2017, uses a different method. The PCCs collectively are capped at \$1.8B/year in support. The goal of Phase II is to get 100% of the unserved subscribers’ areas connected in five years, 85% in three. Funding will be based on a cost model that the FCC’s WCB will create in 2012. The model might be “green field” (uses existing wire centers) or “brown field” (uses existing last 12 kilofeet of wire), tbd. PCCs will be given the choice of either accepting CAF Phase II funding *for an entire state* or not taking it. Areas served by unsubsidized competitors *when the model is complete* (late 2012) will be excluded.

The big idea in Phase II is that if the ILEC does not accept model-based funding for a state, then the FCC will use a reverse auction to give the CAF funding to whatever service provider wants the least money to provide broadband service to customers. The auction will not be statewide; smaller geographies, perhaps groups of census tracts, will be bid for. The bidder must be an Eligible Telecommunications Carrier (ETC), but perhaps the FCC will certify ETCs as well as states, making it easier to obtain.

Phase II has a 4/1 speed minimum, but some to-be-specified percentage of lines may need to be 6/1.5. Note that all CAF-supported “broadband” is expected to have latency and loss low enough to support VoIP.

RoR Carrier CAF: The Rate of Return carriers are on a different set of rules in order to get CAF, which replaces their existing HCF subsidies. They must “extend broadband upon reasonable request” to any subscriber. There will be benchmarks set (more future work) on what constitute reasonable expenditures.

Areas with unsubsidized competitors are again excluded. One slight issue may arise where a cooperative ILEC has no CLEC competitors, just WISPs. It is often hard to get state permission to compete with a coop, but voice telephony is required for an unsubsidized competitor to exclude CAF from an ILEC. This may need some clarification, or the FCC may need to clarify that coops must interconnect easily. The Telecom Act’s rural exemption does not actually exempt small carriers from interconnection, just other obligations such as unbundling. But in practice it can be hard.

One change in rural CAF is that there will be a presumptive cap of \$250/month/line on support. Higher amounts will require permission. This may sound high enough already but a fair number of small ILECs

get a lot more than that! There are also new limits on corporate overhead, so small ILECs are expected to share resources more than before.

Mobility Fund: A separate Mobility Fund is created to subsidize wireless mobile coverage. While fixed funding is on a per-subscriber basis, mobility subsidies will be on a per-road-mile basis. Speeds must be at least “3G” 200/50 kbps, though a carrier may request to fund “4G” at 768/200, and must cover 75% of road miles within two years. Mobility funding is \$300M in Phase I, auctioned in Phase II (2014+) with a \$500M cap. Tribal-area mobility is a separate \$50M/\$100M fund, and keyed to population, not roads.

Towers built with Mobility Fund money must be open to collocation by other carriers, so while only one carrier gets the subsidy, others *who meet Mobility Fund standards* may benefit from the subsidized towers. This is subject to “reasonable negotiation” between the parties. WISPs are unlikely to benefit from this requirement, though they might have commercial access to these towers.

End of Competitive ETCs: One anticompetitive provision of the new rules is the end of the Identical Support Rule, which had given Competitive ETCs the same per-subscriber subsidy as the underlying ILEC. The bulk of CETCs were mobile carriers, who theoretically subsidized mobile coverage from the fixed subscribers’ getting “identical support”. All CETC funding is phased out over five years, fixed and wireless, as “duplicative”. (How’s that for a way to insult the whole idea of competition? It’s the Ghost of Bell Systems Past.) Basically, the FCC conflated CETCs with mobile support, and threw the small number of fixed-CLEC CETCs out with the bathwater.

Remote Areas Fund: Some places are assumed to have too high a cost to build to using conventional LEC facilities, and instead of a blank check, these are classified as Remote Areas. A separate \$100M fund is set up to serve them. It assumes that satellite will be the dominant mode, but that WISPs may also participate, if of course they can qualify as ETCs and provide voice telephony too. (They WISP need not be a CLEC; it could provide VoIP in cooperation with a CLEC that has local numbers.) The structure of this fund is still an open question. The leading idea is for it to be a portable subsidy to consumers, who’d buy satellite or WISP service with it. But it might be bid on a geographic or per-subscriber basis, or somehow joined with the Phase II bidding in areas where the ILEC chooses to reject the statewide funding. It might be on an RFP or “beauty contest” basis, modeled on the ARRA grant programs BTOP and BIP. (That’s scary, even noting that I co-wrote a BTOP winning bid.) They are not quite sure how to identify these remote areas, either. It might just be places where nobody accepts Phase II funding. This little program may be the one with the most opportunity for new non-ILEC entrants.

Usage caps are a tricky issue – for wireline CAF, caps are expected to be comparable to urban service, so a 250GB/month cap is noted as acceptable but a small one isn’t. The Remote Areas fund may require lower caps due to higher backhaul costs or satellite limits.

The Remote Areas fund, if not a geographic exclusive, might be set up as a kind of Lifeline program, means-tested at the subscriber level, so only service to poor people will be subsidized. This is different from the other high-cost programs, which happily subsidize ski chalets and the like. The subsidy will be limited to one per household. It might exclude existing satellite customers, since they’re not unserved, though most satellite customers might argue the point. The FCC here takes at face value claims that new satellites will be much faster, though they will still have geostationary orbit latency.

Intercarrier Compensation: Bill and keep, sort of, eventually

Trying to explain the FCC's view of intercarrier compensation reminds me of a few mathematical analogies. The first one that comes to mind is fractals, the fractional-dimension shapes that maintain their apparently infinite complexity as one views them at different scales. (See the late Benoit Mandelbrot's *The Fractional Geometry of Nature*, or just find a program to experiment with colored renderings of the famous Mandelbrot Set on your computer.) The second one that comes to mind is algebra, and in particular the problem, "if $a+b=c$, and the value of a is 2, what is the value of c ?" Of course if b is still undefined, so is c . By the same token, we know that the FCC has decided that the end office terminating switching component of intercarrier compensation will eventually be zero, but since that's only one of several additive components in the total, the part that's not yet defined may be far more important.

The other analogy is to the field of surveying, or more accurately to surveying a field. One can draw lines, put fences in the ground, to cleanly separate areas. Or one can simply put stakes in the ground. The FCC is terrible at drawing lines. Its Orders and Rules address point cases, like stakes in the ground. They tell you who owns which stake, but they don't tell you where the lines are. The new Order does nothing to fix that; it simply adds a few new stakes, and doesn't even insert them into the ground correctly. (Their understanding of VoIP is breathtakingly inadequate, yet they propose many new rules based on misunderstandings.) Rather than remake the system, it is a Grand Deal between a few big players (mainly ILECs), one that attempts to keep any of the three warring ILEC factions (Verizon, AT&T and the rural ILECs) so unhappy that it appeals the order. Everyone else is a mouse on a stage of dancing elephants.

Hence one has to wade into the intercarrier compensation morass with the understanding that this Order only addresses about half of the questions, introduces more, and leaves in place a structure that is so complex that it can only be seen as a make-work program for litigators. What could have been a simple, clear set of answers has instead been made more complex. Their goal is to make the stakes in the ground look more similar, but only by retaining their individual identity and separation.

Intercarrier compensation today has two major components. *Switched access* charges are generally applied to interexchange carriers (IXCs) for the local leg of a long-distance call. These tariffs were created in 1984, based on an earlier plan to charge competitive long distance carriers for competitive access to what had been a friendly "separations and settlement" system between AT&T's divisions. Rates were set high, to subsidize local service from a share of long distance revenues, but have fallen over the years; the 2000 CALLS agreement essentially reduced Bell-company interstate charges to an average of around 0.6 cent/minute at either end of a call. Rural-carrier rates are higher, and intrastate-call rates in most states are also much higher. There is little pretense of "cost-based" pricing; CALLS was just a negotiated deal, at least as arbitrary as earlier tariffs.

Switched access has several components. Both the originating and terminating LECs charge the IXC. Key rate components include local switching (which applies even if the IXC delivers the call to the end office), switched access transport (to and from the tandem switch), and tandem switching. Host-remote usage charges also apply when the local CO is a remote node. Originating access is moot when the LEC is selling the long distance call itself, something essentially prohibited between 1984 and 1996 but the norm again today.

The other major component is *reciprocal compensation*, created in Section 251 of the Telecom Act of 1996. “Recip” is today applied to local calls, typically between CLEC and ILEC. The originating carrier nominally pays the terminating carrier. The price is based on an ILEC cost study, or else on a contractual agreement (ICA) which may allow bill-and-keep or something else.

But this hyper-complex “system” is even more complicated than that. The rate charged by a carrier to another for delivery of a call may be based on whether the call is local, long distance intrastate, long distance interstate, ISP-bound, foreign exchange, VoIP at one end, or mobile at either end. Over the years, different rules were introduced for mobile and ISP-bound calls, while VoIP had no rules, just suggestions in a footnote to a 1997 FCC *Report to Congress*. Hence call classification is the heart of the system, and the one most in need of reform. And while the 2001 Docket (CC 01-92) that this Order addresses was entitled *Developing a Unified Intercarrier Compensation Regime*, the Commission has taken only baby steps towards unification. And at the same time, taken new steps in the other direction, at least for the interim.

Section 251 applies: The big positive change in this mess is that the FCC has declared that henceforth, all intercarrier compensation is deemed reciprocal compensation under Section 251(b)(5), rather than *access* under the transitional-rate Section 251(g), which was meant to keep old rates intact while post-1996 rules were being written. However, they’ve deemed the old rates to still apply for now, so “recip” is simply the legal basis for a lot of legacy complexity. One open issue is that 251(b)(5) doesn’t accommodate originating access charges, just “transport” and “termination”. They’ve noted (with a fine-toothed comb) that the statutory need for recip to be cost-based only applies to arbitrated CLEC-ILEC contracts, so non-cost-based recip is thus okay for IXCs and mobile carriers.

Now on to some of the many specific changes brought about by this Order:

Access Stimulation: The long distance companies have objected to the “free conference” services that became popular once flat-rate long distance plans were introduced. These services share the terminating access charges with their local carriers, often rural ILECs whose rates are relatively high (2-3c/minute being common). Such activities are deemed “access stimulation” and while several earlier FCC rulings had approved of such actions, the monster-baby Bells now own the biggest IXCs, and both they and Sprint have objected strenuously to paying for this. So the new rule echoes the rule custom-created over a decade ago to save the Bells from paying CLECs for ISP modem-bound traffic. Access stimulation is deemed to exist if two conditions are met. One, the carrier is sharing (very broadly defined, even as discounts) its terminating revenues with the called service, even if it’s an affiliate. Two, the carrier’s ratio of inbound to outbound traffic either exceeds 3:1 (sound familiar?) *or* its inbound traffic has doubled over a one-year period. (This latter clause makes new CLECs hit the trigger automatically. This is not an accident.) Any IXC can file a complaint and the burden of proof is on the LEC to prove otherwise.

Once access stimulation is found to occur, the LEC must lower its access charges immediately to those of the *lowest* Price Cap Carrier in that state. Today that would be the Bells with their CALLS rate. This is subject to some potential mischief, especially from CenturyLinkQwest. They have as many as sixteen *separate* LECs (for accounting purposes) in some states, so if they lower the rate on one little one to zero, all IXCs pay zero to any carrier in the state found to be supporting conference bridges. So don’t be too surprised if, for instance, CenturyTel of Port Aransas (TX) files a strangely low access rate soon. On the other hand, at least the FCC didn’t ban the practice entirely, so there could be a few years left in this

business. After that, it's probably going to all move off the PSTN to, say, Skype, and the Bells will wonder why people use them less and less.

Phantom Traffic: This is traffic that arrives without the correct originating charge number, so that the terminating LEC can't tell for sure if it can charge high intrastate rates. If rates were unified, this wouldn't matter, but in the meantime, the RLECs make a big federal case out of it. So under this Order, Calling Party Number and Charge Number (when present; it normally overrides CPN when the two differ) must be passed along by intermediate carriers, even on VoIP calls arriving across the Internet (which of course hides the actual point of origin). This could cause serious confusion among VoIP providers and require changes to how SIP is used, all to meet what should be a short-term problem, since intrastate rates are going to be lowered to interstate levels pretty soon anyway (as explained below).

But they did *not* order tandem owners to pass along the Carrier Identification Code of the IXC delivering a call to an access tandem, or the OCN of the carrier delivering an intraLATA call to the tandem. So CLECs will still have to purchase daily usage files (DUFs) from the tandem-owning ILEC in order to charge for these calls. The best workaround is to subtend a competitive tandem instead, if possible, and arrange for them to deliver these fields.

Transition to Bill and Keep: The FCC has decided that while historically, the caller was the one gaining the value of a call, it's really better to view the called party as having an equal interest in the call, so both carriers should share the cost equally, rather than having the originating carrier pay the terminating carrier. "It is the called party that chooses the carrier that will be used for originating calls from, and terminating calls to, that user." Huh? (I can't make this stuff up. Remember them the next time a robo-telemarketer calls). So the *default* rate for all call termination (absent a contract to the contrary) will become, over time, bill and keep (telco slang for zero). States are pre-empted from setting access rates in the future. (This has already been appealed, but I think the FCC's Order will be upheld on this issue.) Alternative rates may be negotiated between carriers. The transition will take six years for calls to PCCs; nine to RoR carriers. See the table below.

Price Cap Carriers: Originating and transport rates are capped for now. These are not being Ordered to bill and keep yet; their future is left to the Further Notice of Proposed Rulemaking (FNPRM), to be discussed below. However, the FNPRM suggests moving both to B&K. Transitional USF funding and subscriber charges will make up for some of the revenue losses to some of these carriers, though most PCCs will not need it.

Intrastate rates are moved to parity (with interstate) by July 1, 2013, with half of that difference (if any) removed a year earlier. These at-parity rates will then be lowered to \$.0007 (the old ISP rate) in three equal steps by 2016. In 2017, end office rates fall to B&K; tandem to .0007. In 2018, tandem falls to B&K, though *transit* (when the tandem and end offices are owned by different carriers) rates are left to the FNPRM.

Rate of Return Carriers: Access rates are capped for now. Intrastate end office rates are (as with PCCs) moved to parity by July 1, 2013. But then rates are lowered in three steps to \$.005 by 2016, much higher than the PCC level but well below most RoR levels today. Then it's lowered in three more annual steps to \$.0007, then finally, in 2020, to B&K. This table comes right from the Order (footnotes removed):

Intercarrier Compensation Reform Timeline

(Report & Order, page 271)

Effective Date	For Price Cap Carriers and CLECs that benchmark access rates to price cap carriers	For Rate-of-Return Carriers and CLECs that benchmark access rates to rate-of-return carriers
Effective Date of the rules	All intercarrier switched access rate elements, including interstate and intrastate originating and terminating rates and reciprocal compensation rates are capped.	All interstate switched access rate elements, including all originating and terminating rates and reciprocal compensation rates are capped. Intrastate terminating rates are also capped.
July 1, 2012	Intrastate terminating switched end office and transport rates, originating and terminating dedicated transport, and reciprocal compensation rates, if above the carrier's interstate access rate, are reduced by 50 percent of the differential between the rate and the carrier's interstate access rate.	Intrastate terminating switched end office and transport rates, originating and terminating dedicated transport, and reciprocal compensation rates, if above the carrier's interstate access rate, are reduced by 50 percent of the differential between the rate and the carrier's interstate access rate.
July 1, 2013	Intrastate terminating switched end office and transport rates and reciprocal compensation, if above the carrier's interstate access rate, are reduced to parity with interstate access rate.	Intrastate terminating switched end office and transport rates and reciprocal compensation, if above the carrier's interstate access rate, are reduced to parity with interstate access rate.
July 1, 2014	Terminating switched end office and reciprocal compensation rates are reduced by one-third of the differential between end office rates and \$0.0007.*	Terminating switched end office and reciprocal compensation rates are reduced by one-third of the differential between end office rates and \$0.005.*
July 1, 2015	Terminating switched end office and reciprocal compensation rates are reduced by an additional one-third of the original differential to \$0.0007.*	Terminating switched end office and reciprocal compensation rates are reduced by an additional one-third of the original differential to \$0.005.*
July 1, 2016	Terminating switched end office and reciprocal compensation rates are reduced to \$0.0007.*	Terminating switched end office and reciprocal compensation rates are reduced to \$0.005.*
July 1, 2017	Terminating switched end office and reciprocal compensation rates are reduced to bill-and-keep. Terminating switched end office and transport are reduced to \$0.0007 for all terminating traffic within the tandem	Terminating end office and reciprocal compensation rates are reduced by one-third of the differential between its end office rates (\$0.005) and \$0.0007.*

* Transport rates remain unchanged from the previous step.

	terminating switched end office and transport are reduced to bill-and-keep for all terminating traffic within the tandem serving area when the terminating carrier owns the serving tandem switch.	
July 1, 2018	Terminating switched end office and transport are reduced to bill-and-keep for all terminating traffic within the tandem serving area when the terminating carrier owns the serving tandem switch.	Terminating switched end office and reciprocal compensation rates are reduced by an additional one-third of the differential between its end office rates as of July 1, 2016 and \$0.0007.*
July 1, 2019		Terminating switched end office and reciprocal compensation rates are reduced to \$0.0007.*
July 1, 2020		Terminating switched end office and reciprocal compensation rates are reduced to bill-and-keep.*

CMRS carriers: This is a really confusing area today, and remains such. Mobile (CMRS) carriers today are not allowed to file tariffs. They are required to negotiate rates with ILECs. Calls outside of the Major Trading Area are deemed access; within an MTA local. However, not mentioned in the Order (I think the Wireline Competition Bureau authors of this Order might not realize how the Wireless Telecommunications Bureau's clients work) is the fact that one cannot tell the location of a particular mobile caller from the phone number, since *it's mobile, dummy!* (No, I'm not calling you, my readers, the dummies.) So the real-world procedure is for CMRS carriers to report a Percentage of Local Use (PLU) based on MTAs and prorate all minutes of use (MOU) based on that.

Under this Order, non-access (i.e., the intra-MTA share) MOUs are immediately moved to B&K. Access MOUs follow the PCC transition schedule. Also note that the *T-Mobile Order* has been extended; this allows ILECs to require CMRS carriers to negotiate interconnection agreements with them. The FNPRM asks about extending this to CLECs, who often have a hard time collecting anything from mobile carriers.

The FCC specifically rejected the Halo Wireless argument. Halo allegedly was taking inter-MTA traffic and relaying it on intra-MTA wireless links, and thus claiming it was intra-MTA traffic. The rule is now explicit, that intra-MTA is based on the end points of the call, not the point where it hits the mobile network or anything else.

CLEC access: The earlier parity rules remain in effect; a CLEC may not charge more for switched access than the ILEC it is competing with, with a minor exception for rural CLECs in a non-rural ILEC's turf. If a CLEC is in multiple carriers' turf (some PCC, some RoR), the CLEC charges the same as the one with more lines in-turf. CLECs must refile their access tariffs to match the revised ILEC schedules, with 15 days additional leeway.

Fresh Look/Change of Law: The Order does not grant a Fresh Look for existing term contracts. However, it shall be treated as a Change of Law, so Change of Law clauses in ICAs or other contracts do come into play.

Recovery of lost access revenues: A huge part of the ILECs' efforts in the ICC docket went to calculating how they could recover the lost access revenue. ILECs are willing to change access tariffs *if* they are held harmless. Happily, the FCC did not grant them 100% recovery. But they do get some recovery.

Price Cap Carriers are entitled to recover up to 90% of their 2011 MOU baseline. This is generous, given that there has been no "X-factor" productivity adjustment of the CALLS rate for a dozen years. RoR carriers, whose rates more closely followed revenue requirements, will have a 5% annual reduction from their 2011 baseline. If they lower costs faster than that, they can keep the difference, sort of like a PCC. (The FCC encourages conversion to PCC status.)

A new Access Recovery Charge (ARC) is created to bill ILEC end users a bit more per month. This could rise up to 50 cents/year for five years, to \$2.50, for single-line business and residential lines, double for multiline business. A cap will cover the sum of SLC+ARC. The FCC expects that the average ARC will be well below the maximum, maybe 11 cents/month. CLECs are, of course, allowed to charge whatever the market will bear.

A carrier may choose to decline CAF-related recovery charges, in which case they are not required to meet the broadband buildout and public interest obligations. So there is some link between broadband expansion and access-charge replacement.

Feature Group A:

Virtual NXX/ FX:

Those two paragraphs are intentionally left blank, as neither term is mentioned in the 751-page Order. Yet these are both critical issues. And they are really the same issue, and the same issue that *could have* made VoIP a much simpler one. Rather than take the simple approach, and allow the PSTN to have clear points of demarcation, they have gone the other way. This Order doubles down on the "end to end" view of a telephone call, where the actual human endpoints are what determine the ICC classification, not the demarcation.

Feature Group A is the switched access tariff that applies when an end user line (originally "line side connection") is used to carry a non-local call. This goes back to the 1970s' MCI Execunet, the original, highly-controversial competitive toll service. After a few years of litigation, Execunet was made kosher with the proviso that its lines be tariffed differently. This was the birth of switched access, a few years before Divestiture. And ever since then, the ghost of Execunet, of "tail end hop-off" toll evasion and "bypass", has driven FCC policy. It's utterly obsolete in today's competitive world, where the Internet has no distance tolls, but they just can't get over it.

Nobody orders FGA circuits, of course. A call is *deemed* to be FGA when a carrier decides that the other carrier is doing something they don't like, and reciprocal compensation owed to the CLEC can magically become *originating access* (I told you it mattered) owed to the ILEC. The biggest cases in the past decade have involved modem pools and Virtual NXX, where the modems had a phone number local to the caller but the modem was in a data center elsewhere. This was, of course, okay when ILEC foreign exchange lines were used, but once CLECs took over the business, ILECs changed their mind, and around 2000, started adding language to ICAs saying that VNXX would be deemed access (FGA), not local. Existing ICAs without that clause allowed some CLECs to remain in the business, but it became harder to

enter. Global NAPs, for instance, a huge VNXX-modem player in Massachusetts, got forced or fooled (take your pick) into arbitrating a new ICA, got saddled with that clause, and was shut down for non-payment of originating access charges on billions of purported access minutes of what had been reciprocal-compensation calls.

So the proper status of VNXX remains unsettled. And because FGA still exists, and the “end to end” theory of calls still exists, there’s still a question of how VoIP should be handled. Had FGA been abolished, then *Internet* VoIP calls could just have been billed from demarc (gateway) to destination, while VoIP-as-LEC-technology could have been treated like TDM. But instead, FGA lives on, originating access is left to the FNPRM, and VoIP becomes a sort of neutron bomb that leaves buildings intact but destroys regulators’ ability to reason.

Regulatory Status of VoIP

The high-level message here is that the FCC has finally decided, after 15 years, that VoIP calls *going forward* will not be exempt from interstate access charges, but will be exempt from intrastate ones. A “local” VoIP call will be treated as any other local call (recip), but a non-local one will be subject to interstate access (even if actually intrastate). So VoIP retains a cost advantage over TDM access lines until intrastate charges are brought to parity in 2013. The rule is explicitly not retroactive, so Level 3’s *billions* of dollars in “agree to disagree” disputes with AT&T and Verizon will not put them into instant bankruptcy. It will be interesting to see if VZ has any write-offs from these billed uncollectables.

Examining it in finer granularity, the new rules note that interconnected VoIP traffic is *not* subject to the “ESP exemption” going forward. Whether it was in the past is explicitly not answered. Indeed a lot of things are explicitly not answered in this Order; it’s very lawyerly about that. The 64.9% safe harbor PIU used for USF will not apply to ICC. Carriers who serve VoIP providers may compute a PIU, or use per-call billing (if they are assumed not nomadic, I suppose). Carriers may use the VoIP market share numbers in the Local Competition Report as a proxy: “...we permit the LEC instead to specify in its intrastate tariff that the default percentage of traffic subject to the VoIP-PSTN framework is equal to the percentage of VoIP subscribers in the state based on the Local Competition Report, as released periodically, unless rebutted by the other carrier.”

VoIP traffic may be exchanged over local interconnection trunks, not just meet-point access or Feature Group D trunks, provided that there is some local traffic on those trunks. Rates will then be per the ICA. LECs may not block VoIP traffic; interconnected VoIP operators may not selectively block PSTN traffic either. This appears to address cases where VoIP operators block calls to high-priced rural carriers.

Now to look at it a bit differently. What these new rules show is that the FCC has *literally no idea* of what the hell they’re talking about here. They do not know how VoIP works, or how the Internet works. They know of a point case, a stake in the ground, based on Vonage, and that’s what they’re regulating. All of the above makes sense for Vonage, but they don’t limit themselves to what has been referred to as “nomadic over-the-top interconnected” VoIP. They are still unclear about what PacketCable is, and don’t clarify. There are elements of the Magic Pixie Dust theory in play: By using the IP header in the bearer path, the call magically changes its nature. Yet they also say that they are writing “technology-neutral” rules. They also don’t define IP, or Internet. So will it be possible to pass off RINA (a new, post-IP

packet data protocol with far superior QoS and security) as falling under the IP rules, since it's also not TDM? Good question.

What's frustrating here is that the Commission routinely confuses "IP" with Internet. They never mention MPLS, except in one footnote, and don't seem to realize that most high-quality VoIP is sent over MPLS, isolated from Internet traffic, not over the Internet. They have no idea of what a Session Border Controller is, or how it's needed for most VoIP interconnection. So they explicitly don't decide whether VoIP is "telecommunications" or "information service", ignoring the obvious fact that it is merely raw technology that can be used either way. That concept, of a multi-use technology, totally evades them. Instead, they attempt to treat VoIP as one Thing, and they continue to lay PSTN-type regulation atop it, including requirements for CPN that might require changes to SIP, among other things. They also assume that VoIP must have different *locations* for interconnection, since for some reason only TDM can be exchanged at current POIs; IP, they seem to assume, has to be interchanged at certain Internet facilities, like urban NAPs or carrier hotels.

Things gets worse up in their discussion of IP-IP interconnection. A number of parties asked for ILECs to be required to accept interconnection in VoIP instead of TDM format. This was moved to the FNPRM for resolution, not settled here yet. But the FNPRM is *frightening*. "We thus seek comment on the scope of traffic exchange that should be encompassed by any IP-to-IP interconnection policy framework for purposes of this proceeding." That's not just VoIP; that's *IP* itself, as in Internet peering and upstreaming. They explicitly ask if non-VoIP IP should be brought into this PSTN regulatory framework. This was in response to comments about *managed* VoIP interconnection. (More details below.)

Yet elsewhere, they note that because "IP" is unregulated, and their goal is to migrate the PSTN to IP, the PSTN itself might become unregulated. That's AT&T's position, that the Magic Pixie Dust of IP should take away all regulation from the PSTN (mandatory interconnection, unbundling, etc.) once TDM is phased out, which could happen *before* the 9-year ICC rate transition is complete! So what would be the point? So there's a real continuum here, from regulate the Internet as PSTN to deregulate the PSTN as internet, and not a lot of understanding of why the two are different and need to be treated differently.

They completely miss the idea that an internet is *content* passed across telecommunications. There is absolutely no notion of "layers" here, that "telecom" really means the bottom layers, while content rides above. It is 100% "beads on a string" thinking. A wire is TDM or IP, period. The sections on IP are all one crazy stew, a mix of buzzwords and random ideas, black and white and red all over, less like a newspaper and more like a frog in a blender. The VoIP rules are just a sign of the underlying problem.

Further Notice of Proposed Rulemaking: USF matters

The 751 pages released in November include 105 pages of Further Notice, questions still to be answered. Four dates apply. In general, Comments on USF issues are due by **January 18**, with Reply Comments by **February 17**. Comments on ICC issues are due **February 24**, with Reply Comments by **March 30**. These are tight deadlines given the amount of material left open. Perhaps Mr. Genachowski was almost right when he said that this was like having run 25 miles of a marathon. They have run 25 miles; they just got off course, so they are still maybe 10 miles from the end.

Retail prices for subsidized CAF services: They ask how to set a reasonable retail price for broadband services, which have never been subject to price regulation. The guideline for CAF voice support is to be within two standard deviations of the urban-carrier average. Is that correct for broadband too? Should this be at the 4/1 speed? How should not-identical broadband plans be compared? Should this be benchmarked to wholesale or retail urban broadband rates? How can wholesale urban rates be benchmarked when it is no longer offered? (Dummy, force the PCCs to offer it! The 2005 detariffing was a disaster and what caused the whole “network neutrality” kerfuffle in the first place. Alas, CAF really means that subsidized carriers too can detariff DSL.)

Voice over IP interconnection: Since CAF recipients are required to provide voice telephony, and the FCC wants to promote VoIP (technology neutrality being so *passé*), should CAF recipients be required, as a term of CAF, to provide IP-to-IP voice interconnection? As noted above, this is technology that the FCC does not understand.

Backhaul to third parties: The CAF model is extremely monopolistic, supporting one broadband provider per location. However, noting the existence of community networks, the FNPRM asks if recipients of CAF subsidies should be required to make their subsidized middle mile services available to them at local POIs. If so, how should disputes between them be resolved? (Tariffed, regulated prices seem out of the question.)

Technology Opportunities Program: The Benton Foundation and Public Knowledge asked for the creation of a Technology Opportunities Program fund to support community networks, WISPs, and other “non-traditional” providers. “Are there other things the Commission should be doing to enable such entities to further extend broadband coverage, particularly in currently unserved areas?” This could be an opening for all sorts of suggestions.

Middle mile: Should subsidized rural carriers also get subsidies for the middle mile circuits needed to reach the Internet backbone?

Overlap: “Should we adopt a rule that rate-of-return carriers are not required to serve any location within their study area that is served by an unsubsidized competitor and will not receive support for those lines to the extent they choose to extend service to areas of competitive overlap?” This would protect WISPs and cable, for instance, from subsidized competition from RoR carriers. This is not an issue for PCCs since they don’t get the same near-blank check. The Order is clearer that if an *entire* study area (ILEC turf within a state, narrowly defined) is covered by an unsubsidized competitor, it doesn’t get CAF.

Appropriate Rate of Return: The actual return that RoR carriers are allowed to earn was set at 11.25% about 20 years ago, and is clearly excessive in today’s economy. The FCC’s preliminary conclusion is that it should be around 9%. Is this the right number? How should the resultant savings be distributed?

Unsubsidized competitor overlap: How should this overlap be determined? There are a lot of process questions involved here.

Letter of Credit: The FCC proposes that ETCs must provide a Letter of Credit to the FCC, so that their subsidies can be taken back if they do not live up to their promises or meet the obligations of CAF. This process raises questions of its own.

Mobility Fund: Many questions about this are collected in the FNPRM. What should be the minimum geographic size unit for bids? Census tract? Bidder-defined area? How should the auction be designed? Multiround or sealed bid? Maybe like the wireless auctions? Should there be a small business credit? If so, how should small business be defined? (These “designated entities” have been rather problematic in the auctions, since they often were affiliates of larger carriers.)

States where PCC refuses the offer: The Phase II offer of CAF to price cap carriers is on a statewide basis. If the PCC turns it down, how shall the reverse auction of funding be handled? Should the geographic areas be the same ones suggested for mobility? Should they be bidder-defined? Census tracts?

Duration of support: Should CAF be awarded for a five year term or longer, such as ten years? What should the terms be for renewal afterwards? Unlike the current USF, it is not automatically perpetual.

Eligibility to bid: Who should be eligible to bid in the reverse auction for CAF? Does ETC designation have to be in place before bidding? Should there be standards for financial stability? If an ILEC turns down the statewide offer, should it lose or retain its ETC status (and right to bid) in that state?

Public Interest Obligations: What are the obligations of CAF recipients? This applies separately to mobility fund as well as PCC and RoR funds. The Commission seeks guidance understanding how to measure service quality and the trade-offs between different service metrics, deployment schedules, maximum expenditures and support, and other issues. Basic common carrier obligations and network openness are not, however, being suggested. I suppose they think this was solved by their likely-to-be overturned “network neutrality” Order.

Remote Areas Fund: Should this fund take the form of a portable consumer subsidy (non-exclusive) or a bid (exclusive)? If it’s bid, should it be bid on a per-subscriber basis (like CAF fixed), per geographic area, or combined with an adjacent bid? Or should it be done on an RFP basis, with a beauty contest to pick the winner, like BTOP/BIP? Other suggestions are welcome too.

Can the FCC grant ETC status for CAF, or should it remain with the states? What should the term of support be? How should backhaul be handled? Voice must be offered, but is the 4/1 speed practical in remote areas? What should usage caps be?

If the subsidy is portable, should it be means-tested, like Lifeline? Is it then in lieu of, or an extension to, Lifeline? Should existing satellite customers be allowed to participate, since they’re not unserved? How should the budget be capped – first come first served?

Further Notice of Proposed Rulemaking: Intercarrier Compensation

While many critical issues aren’t mentioned and may not *directly* fit the open questions, issues like FGA and VNXX might well be worth discussing. It may also be worth raising issues about the distinction between the Internet and the PSTN, and teaching them about basic concepts such as firewalls, SBCs, etc. Right now it is all based on the notion of a move towards bill and keep, modeled on how they think the Internet works, and an evolution towards IP, which is thus assumed to be The Internet itself.

Originating Access: How quickly should this be phased out? On the same schedule as terminating access? Only after terminating access has been zeroed out? How should lost revenues be recovered?

They did at least note my comments (for CRUSIR) in a footnote that this should be done away with quickly. But then they misquoted me too (in footnote 2351).

8YY traffic: Toll-free traffic is currently billed in reverse: The calling side is deemed to be terminating access and the called side originating. This makes sense because it corresponds to the payment, and the fact that originating access is the subscriber's choice. Indeed before CALLS, originating access rates were allowed to be higher than terminating, because the caller had a theoretical choice of originating carrier. They ask whether 8YY traffic should continue to be treated the same inverted way.

Transport: While the goal is for transport and termination to move to B&K, a number of issues remain open, both during and after transition. The transition table does not discuss transport rates; these are arbitrary and above cost. There's also the question of dedicated transport – leased lines used to carry non-local calls. In most access tariffs today, these are priced well above cost. IXCs, of course, pay for dedicated transport to each tandem or end office that they connect to via ILEC facilities. Reciprocal compensation traffic, in contrast, is usually on a “single POI per LATA” basis, where trunks around the LATA are not charged. So a CLEC will typically have some “ICA” trunks at no charge, and some “meet point” trunks at the Dedicated Transport rate. So these rates are open to discussion.

Single POI: The single-POI per LATA rule itself becomes a critical question. The B&K concept is built around an “edge” rather than a “POI”, and it's not clear how these will differ, though the edge is most likely a tandem switch, not a physical point. Will the CLEC have to pay for additional transport to an “edge”? Will a large LATA require multiple edges or POIs? These could substantially raise the price of CLEC interconnection, especially if access-rate transport is required. Switched access is normally delivered to the serving tandem, not LATA-wide.

CenturyLinkQwest raised the question of traffic-based POIs, wherein the single POI only applies to small amounts of traffic, and additional POIs are needed as traffic rises. This could raise CLEC costs considerably. Another proposal, called METE, allows one POI per LATA but with separate trunk groups per edge. This is actually not uncommon practice nowadays.

Tandem switching: Noting that AT&T has long been pushing full deregulation of the tandem, how competitive is the tandem market? While the Order contemplates that tandem switching at an “edge” be at B&K, the transitional rates for tandem switching and tandem-switched transport (now usually at a low per mile per minute rate) are open to discussion.

Transit: When a tandem switch is *not* owned by the same carrier as the destination end office, the tandem switch is performing transit. This is not contemplated to go to B&K, so the question of how competitive the market is matters. Neutral Tandem enjoys their price umbrella, but they are not a good option everywhere. Cost-based transit would benefit most carriers. This is an open question for the FNPRM.

IP POIs: They ask whether IP to TDM conversion would impact the number and location of POIs. Here's where the FCC conflates the Internet's physical structure with the PSTN, and assumes that the Magic Pixie Dust header will force POIs to move. They have *no idea* that most interconnection would go through an SBC which meters out telephone calls *just like TDM*. They seem to think that telephone networks would interconnect like backbone ISPs do, no firewall or anything. It's just sad.

Tariffs vs. ICAs: What should the role of Interconnection Agreements be, vs. tariffs? Should ICAs replace all access tariffs? Should the T-Mobile Order's mandatory negotiation be extended to all types of carriers? I think this is risky: ICAs favor ILECs, while tariffs are more subject to regulatory scrutiny. A better approach would be to require interconnection tariffs, allowing contracts to override them. VZ-Massachusetts, for instance, has a CLEC interconnection tariff; ICAs aren't needed, though they're allowed.

Subscriber Line Charge: The "FCC access charge" on the retail phone bill is capped, with ARC an additive. "Are carriers' regulated common line recovery bearing an appropriate share of the cost of the local loop, or too much (or too little)?" If voice is an application of an IP network, should SLC be assessed on it? (It's still a loop, dummy; SLC pays part of the interstate share of the loop cost.) The FNPRM does, however, pick up on one item that we (CRUSIR) and a few others asked for: Should SLC be included in the advertised price of ILEC services? Currently, it's not, and that is deceptive, since the SLC is simply part of the price, not a tax, which it's deceptive made to look like.

Further Notice of Proposed Rulemaking: IP

This whole section is where the FCC needs to learn that the PSTN is not the Internet, that IP does not define Internet, and that the Internet is not simply a public packet network, a packetized PSTN. They as far too many questions that point towards too intrusive a regulatory model, even leading towards regulating the Internet backbone itself.

IP-IP traffic: Not counting PSTN voice traffic, should IP-IP interconnection be regulated? The FCC says it has "chosen not to" regulate Internet peering – they are finding authority that does not exist. They ask if policy should cover non-voice traffic and how they could tell voice apart? This is what SBCs do, so they really need a lesson in VoIP 101 here.

Bear in mind that their cite to an ostensibly-supporting Comment here is towards Google's request for interconnection of broadband services under Section 251. This was a reference to broadband access services, lower layer pipes whose payload included but was not limited to SIP, not the Internet backbone. But the FCC conflated the two.

"We thus seek comment on the scope of traffic exchange that should be encompassed by any IP-to-IP interconnection policy framework for purposes of this proceeding". This needs to be stated very loudly that the PSTN is not the Internet, and while IP to IP phone call interconnection *within the PSTN* should be treated just like other PSTN calls, interconnection *outside of the PSTN* is None Of Their Damn Business.

Technology neutrality: Section 251, which regulates interconnection between *common carriers*, is noted as being technologically neutral. The FCC asks if they should flout this: How well, they ask, will this work with IP traffic, since it's magic pixie dust?

Total deregulation of the PSTN: Since Internet peering is today unregulated and they are not sure if they should regulate it, they ask if IP-IP interconnection of PSTN voice calls by common carriers should also be unregulated. Of course if it were, then all of the "bill and keep" and other ICC details would be moot, as the unregulated ILECs could then charge whatever the hell they wanted, so long as they offered IP interconnection. Later they ask, "Even if there were no disincentive arising from the intercarrier compensation rules, would some competitors seek to deny IP-to-IP interconnection on reasonable rates,

terms, and conditions to raise their rivals' costs? Are there circumstances where a refusal to interconnect on an IP-to-IP basis would result in service disruptions?" In the latter case, they think that magic pixie dust seems to overcome air gaps in interconnection. In the former, they totally ignore the concept of market power, and how it is wielded in an anticompetitive world. *But that's their job.* Does John D. Rockefeller's ghost now possess the WCB? Maybe they simply believe AT&T, who stated that there is no terminating monopoly on IP traffic. This is of course false; most subscribers are on one IP network, which has the terminating monopoly on their traffic.

"In addition, insofar as the Commission addresses IP-to-IP interconnection through a statutory framework historically applied to TDM traffic, we seek comment on whether any resulting changes will be required to the application of those historical TDM interconnection requirements, either through rule changes or forbearance." They regulated Touch-Tone telephone service the same as dial service; there is nothing to change here. But they can't see the forest for the magic pixie dust trees.

They finally solicit some clue in this paragraph:

1346. Other comments propose IP-to-IP interconnection frameworks that would encompass narrower categories of VoIP services, such as "managed" or "facilities-based" VoIP, as distinct from "over the top" VoIP. [They are totally different.] Are there advantages or disadvantages to focusing on this narrower universe of voice traffic as a technological, policy, or legal matter? For example, are there different costs or service quality requirements associated with such services such that those services would warrant distinct treatment? [Of course. "Over the top" is not just PSTN.] How would such traffic or services be defined? Would interconnection for other VoIP services be left unaddressed at this time? Or would they be subject to a different policy framework, and if so, what framework would be appropriate?

Negotiated interconnection: Again confusing protocol with a common carrier framework, they ask, what is the statutory authority for requiring "good faith negotiations" for VoIP interconnection between carriers? Of course protocol should not matter if it's between carriers, but they ask if this negotiation should only apply to a certain class of traffic, as in telephony, rather than all of their IP traffic. Do Section 706 or the Clayton Act give the FCC the authority they seek? Can they merely invoke ancillary authority because IP is "communication"? (Courts have ruled that ancillary authority must cite what rule it's ancillary to. It doesn't exist in a vacuum.)

IP-to-IP rates: Should VoIP calls be treated the same as non-VoIP calls? Should they mirror TDM rates? Should all VoIP calls be treated the same as each other (unlike non-VoIP calls)? Should VoIP be treated the same as non-VoIP IP traffic? (That's the proverbial "bad question.")

Mandatory availability of IP: What about XO's proposal to require carriers to offer IP interconnection within five years, so at that point TDM is strictly optional? What to do then about TDM stragglers? The proposal suggests that the straggler must pay for the media gateway, and perhaps the backhaul to a magic pixie dust IP interconnection point, since they think VoIP calls can't be interchanged at local POIs.

Applicability of Section 251 to Internet traffic: "In addition, we seek comment on whether the provisions of section 251 interconnection are also service neutral, or do they vary with the particular services (e.g., voice vs. data, telecommunications services vs. information services) being exchanged? If so, on what

basis, and in what ways, do they vary?" Again, confusion reigns supreme. Section 251 applies to telecommunications common carriers, not information services. The PSTN and the Internet are not the same! They have no idea that there can be higher-layer services run across a telecommunications service. It's beads on a string again.

Can a LEC only use VoIP?: They actually ask if a LEC who stops using circuit-switched voice and starts using IP-mixed voice can still be a LEC. "To what extent would the Commission need to classify VoIP services as "telecommunications services" or "information services" to resolve whether the provider remained a LEC?" They continue to miss the point that a protocol header does not define service, so it is certainly possible use IP within a telecommunications service *or* an information service. This also brings into question the common CLEC practice of using VoIP to multiplex the "local telephone service" component of an EEL (shared voice-data T1).

Section 256 and other sources of authority: Section 256 is meant "to ensure the ability of users and information providers to seamlessly and transparently transmit and receive information between and across telecommunications networks." This seems to recognize the difference between content and carriage. But they ask instead what grants them the authority to regulate IP interconnection. If it were just phone calls, they wouldn't need this authority. They then ask if Title I "ancillary authority" does it, or if anyone can find any other authority somewhere, can they please tell the FCC about it, so the FCC can use it to regulate the Internet?

Call Signaling rules: Can their "phantom call" signaling rules be applied to one-way VoIP providers, who don't have phone numbers? How? Should non-NANP numbers be used, and if so, what would the consequences be? Where in the signaling path would the phone number originate? Of course by the time this gets worked out, the jurisdictional billing requirements behind The Phantom Menace should be obsolete anyway, so it's a silly exercise in blocking innovative voice applications. The gateway should be treated as the end of the call, not the elusive end user. But that breaks their fanatical end-to-end notion.

That's just an overview of what's in this massive Order and FNPRM. It certainly seems worthy of a response. Perhaps it should contain a "VoIP 101" tutorial, as well as an explanation of the difference between content and carriage, and between an internet (of which The Internet is a prototype) and the PSTN. Certainly many of the ideas herein, especially those that deal with the Internet itself, are extremely dangerous, as well as unexpected. Since the nominal topics of the Dockets were Universal Service and the PSTN, most people to date are unaware that they have proposed regulating the Internet *per se*, on the specious grounds that some of its traffic ends up on the PSTN. This needs to be made better known.