

# Dynamic Industry Structure as *Policy*?

## Three Alliances and World Telecommunications

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### ABSTRACT

In the space of just one brief year, the stage for global telecommunications has been set. Three world alliances have emerged, from combinations initiated by four of the five large telcos – AT&T, BT, DBP Telekom, and France Télécom. They are each striving forward, toward a new global regime. This paper asks what global industry structure do we want, and what structure will we get, beginning with the alliances. A dynamic industry structure, *as policy*, becomes the focus.

The analysis proceeds from an unconventional view. This view would understand the technical, and social, evolution in networks. To encompass the swings between innovation and standardization, a “community of competitors” gives twin policy billing to competition and consensus, with equal force for both. An industry structure to suit necessarily iterates through a dynamic routine, as a matter of conscious policy: the industry alternately separates into fragments, then coalesces into a temporary monolith, and repeatedly.

As the paper considers the three alliances from this view, the view is itself tested against practice, in cases from disparate parts of the globe. In the conclusion, the other large telco, NTT, also contributes to understanding dynamic structure in a community of competitors.

It is less than two years since BT in the UK, together with MCI in the US, announced they would join forces to supply global telecoms services. As expected, that announcement triggered a headlong rush. The other, major world telcos moved vigorously – they intend not to be left off the new, global stage. The developments have been rapid-fire and, in some cases, even surprising.

DBP Telekom and France Télécom began to pump life into their EUNETCOM joint venture, to consolidate their position in Europe. Subsequently, they have announced an alliance with the *other* “second force” carrier in the US, Sprint. Ostensibly, this new configuration is the global entry from (continental) Europe. AT&T has announced – they

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did so when BT-MCI went public – its WorldPartners alliance. The company has “not looked back” as it aggressively has built a number of linkages around the world, including with Unisource for Europe.

After just one brief year, the stage for global telecommunications was set, with four of the five large telcos – AT&T, BT, DBP Telekom, and France Télécom (in alphabetical order; NTT, in Asia, will appear below) – striving forward toward a new, global regime. The result is three aspiring entrants for the global arena, each with a dominant partner/s from a strategic region of the industrialized globe:<sup>1</sup>

dominant “center” in:

- |  |                      |
|--|----------------------|
| • BT-MCI’s Concert                               | UK                   |
| • DBP Telekom-France Télécom-Sprint <sup>2</sup> | Europe (continental) |
| • AT&T’s WorldPartners                           | US                   |

Asia, the third leg of the triad, is conspicuous by its absence from the righthand column.

What industry structure, global and otherwise, do we want for telecommunications, and the related technologies with which it increasingly converges? What industry structure are we likely to get? Recently I have suggested that we can answer the structure questions only if we are prepared to incorporate the dynamics also. This view is unconventional overall, and for industry structure it prescribes iteration through a dynamic routine as a matter of conscious policy.

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<sup>1</sup>To suppose that only traditional telecoms companies will shape the global network future is, itself, a large proposition to swallow. There are several other *categories* of contenders for the global future:

- The several proposed multi-satellite networks, such as Iridium, intend to be quite global.
- With convergence, the rise of global *broadcast* networks, such as from Rupert Murdoch and Ted Turner, must be considered.
- Global computer service companies (“system integrators”), such as EDS, will play a role.
- The US RBOC’s, though in AT&T’s shadow, will also continue to “reach out” around the globe.

And there are other traditional telcos with an important global presence, most notably Cable & Wireless. However, the five major telcos – DBP Telekom, France Télécom, BT, AT&T and NTT – appear, by dint of their starting positions, to command the high ground for the *next* steps to a global regime. (For example the three alliances, as listed middle of this page, currently carry 10, 18 and 26% respectively – or together 54% – of the world’s international traffic [Cawley 1994]). Whether their lead *continues* will turn very much on the choices which each makes.

<sup>2</sup>The DBP Telekom-France Télécom-Sprint alliance has the working name Phoenix, however that will not be the final operating name. This paper will use the names of the three partners together, to identify the alliance.

This paper addresses the normative and the descriptive questions for global telecommunications industry structure, when taken from this novel view. The three main entrants for global telecommunications are assessed from the new perspective, for what-do-we-want and what-do-we-get. But at the same time, this new conception is trialed against the complex real world case. Surely such mutual testing, where the idea and the empirics reflect mutually upon each other, is our process-of-choice to evolve more useful conceptual tools.

We begin with preliminaries – we establish salient details of the three new alliances, and we also briefly review the new conception for industry structure and dynamics. With that as foundation, we look again at the new entrants to global telecommunications, now with the new view. Then we can turn to what we want and what we get, structurally. Dynamics as policy is a central focus.

You are invited to test both the new idea and your notions about the global structure which is emerging, when seen through the new eyes.

## **1 Preliminaries**

### *The three new alliances*

What are the particulars for these three telecommunications alliances, now setting forth on the global stage?

For our purposes here, the first two are straightforward. BT-MCI's Concert and DBP Telekom-France Télécom-Sprint are alliances among two or three members, with each alliance intent upon becoming a (if not the) global service provider to multi-national companies, the customer group which is perceived as the vanguard for globalization. For BT-MCI though, there is an added fillip. Concert has now established several "distribution arrangements," that is, it has engaged local sales agents. In Japan, the sales agent is Nippon Information and Communication/NI+C International – NI+C International is a joint venture of IBM Japan and NTT.<sup>3</sup>

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<sup>3</sup>Concert's other distribution arrangements, to the present, are in Europe.

- Denmark: TeleDanmark
- Finland: Telecom Finland

The composition of AT&T's WorldPartners is another story. Initially partners divided between equity and associate status; that has changed.<sup>4</sup> Now all partners are members, while some are also owners. They are sprinkled around the globe. At mid-February '95 the WorldPartners are:

in Asia

member

- the Philippines: Philippines Long Distance Telephone Company
- Hong Kong: Hong Kong Telecom International
- South Korea: Korea Telecom
- New Zealand: Telecom New Zealand International
- Australia: Telstra

member and owner

- Singapore: Singapore Telecom
- Japan: KDD

in the Americas

member

- Canada: Unitel

member and owner

- the US: AT&T

in Europe

member and owner

Unisource<sup>5</sup>

- Sweden: Telia
- the Netherlands: KPN [new name for PTT Telecom of the Netherlands]
- Switzerland: Swiss PTT Telecom
- Spain: Telefonica

(The Unisource relationship with SITA is not part of WorldPartners.)

in Africa

member (announced)<sup>6</sup>

- South Africa: Telecom South Africa

Map 1 depicts AT&T's WorldPartners geographically. Again, there is an additional fillip. In Japan, WorldPartner KDD has agreed with NTT to interconnect their virtual private networks.<sup>7</sup>

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- Norway: Norwegian Telecom
- In two countries, Concert will distribute through two BT ventures.
- Germany: A joint venture with Viag
  - Spain: A network purchased from Banco Santander

<sup>4</sup>Discussion with the president of WorldPartners Company, Simon Krieger.

<sup>5</sup>Unisource and AT&T have settled on a 60/40 joint venture – named Uniworld – to hold the WorldPartners European equity and operate the European entry in WorldPartners.

<sup>6</sup>Telecom South Africa has announced a memorandum of understanding with WorldPartners.

<sup>7</sup>For KDD, that is VirNet; for NTT, Members Net.

— MAP 1 —



# AT&T's WorldPartners

by: internal structure

AT&T — member  
AT&T — member and owner

[ ] — “re-industrializing” society  
( ) — “second force” carrier  
<> — Unisource carrier

*Telecoms industry structure, in the new view – a brief recap*

The new conclusions about industry structure grow from an underlying logic. We first summarize the position on industry structure, then review the underlying argument.<sup>8</sup>

- Industry structure

To accommodate the dynamics, industry structure is conceived as “nested.” For instance, ETSI in Europe is a nesting of the region’s carriers (and others).<sup>9</sup> The key feature of the nest is that individual units can act independently, when called for, but the units can also come together as a larger group, when concerted action is indicated. Hence, the structural dynamics: alternate separation into fragments, then coalition into a temporary monolith, and repeatedly.

Policy dictates the points of inflection between industry-as-parts and the industry-as-whole. To use more direct words: conscious, joint choice selects the occasions which require a joint approach, and it also plays a role in the reverse. ETSI standard-setting, for instance, represents a joint choice that the time has come to settle on some technological suite, an agreement which is essential for a network to interconnect and operate. Equally, innovations are pursued more locally, independently, company-by-company, new ideas which later will feed some more collective standard-setting procedure.

Both part and whole have their place. The idea of virtual hierarchy is now used occasionally;<sup>10</sup> in the conception here, it would take on pinpoint meaning: The industry group operates as *both* hierarchy and peers. Also, the ETSI example makes clear there is no clearcut temporal sequencing, but a much more complex situation in which separation and coalition likely occur in parallel. For instance when the same company is active in different technologies, it will probably find itself both independent and grouped at the *same* time. Hierarchy relations and peer relations are indeed intermixed.

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<sup>8</sup>Two recent papers, Allen (1994; forthcoming), provide detail.

<sup>9</sup>For its illustrations, the paper will turn to successive regions of the globe, and cases appropriate to the particular point.

<sup>10</sup>I hatched the idea myself in 1986. It also emerged elsewhere, in parallel, but I do not know the timing in the other cases.

Is this Coase and Williamson simply warmed over (or standard microeconomics on vertical integration generally), or management theory on centralization/decentralization? Decidedly not. Here there are frequent, intermixed shifts, back-and-forth between grouping at some industry level versus acting as an individual company. Those shifts are a matter of conscious, promulgated policy.

Some of the structural implications: Power relations, not surprisingly, are central. If one or a few companies simply dominate the industry, lesser brethren are not likely to accept a coalition, certainly not the fluid repeat changes which are necessary – but some companies will surely be more equal than others. Power relations, as a result, here take a form which acknowledges leadership but which, at the same time, confers peer status on the smaller member. Also: To sustain the global and the local equally, as the virtual hierarchy requires, puts an emphasis on two basic capabilities. One is clear definition of the company and its boundary, while the other is the ability to link well with others when required.

- The underlying logic

These conclusions about structure are driven by the underlying requirements for continuing innovation in a network. Repeated cycles between innovation and standardization demand an alternation between competition and consensus. When the time arises for a set of competing new ideas to be melded into an interconnectable standard, joint choice is necessary to move from competition to consensus. That is the structural point of inflection between industry-as-parts and the industry-as-whole. (Technically, that is a point of critical mass, and the reverse is Schumpeter's "creative destruction.")

This turns upon the human capacity to shift viewpoint fluidly among levels of the nested actors, depending on the issue in hand – when innovation is the question, the focus is more private; when standardization, more public. One key effect is to maintain local variety, within standards agreed by a larger community. The policy regime which is implicit here might be called a "community of competitors."

Market evolution depends upon the dynamic nested structure operating within this policy regime. Competition and consensus iterate repeatedly and, as we have seen

already in structure, they intermix inextricably. The competition is principally among ideas and takes a plus-sum form, to permit the dynamic shifts. Competition is vital, but so is its opposite, consensus.

- Conclusion to the preliminaries

Some might ask, is it reasonable to suggest that such a complex arrangement be attempted. I believe, instead, the question is whether any *less* complex conceptualization reasonably captures the reality we live with daily. If we need an illustration, the intellectual property rights/IPR policy which ETSI intended<sup>11</sup> serves precisely.<sup>12</sup> One way to express the essence of the intended ETSI policy is that companies bring their individual innovations to the table, to be incorporated into a vehicle which will serve a wider public. This of course is the point of inflection described above, and the shift from the individual level to a higher level in the nest.

On the supply side of the market, which is our concern here, this regime dictates a culture of the industry. The group requires social coherence adequate to see the members through the repeated swings away from each other and back, again. In the parlance, this is a community of the industry, with tacit and evolving but mutually accepted rules of the social road. Economics<sup>13</sup> has long grappled with the challenge of trying to understand oligopoly. Perhaps we begin to unearth here where some of the complexity lies, and why we may reasonably expect the understanding to be a challenge.

In this new view, telecommunications industry structure, our direct focus, makes sense when seen dynamically. But the structure is dynamic in a particular sense. The dynamics are conscious, as a matter of policy, not the fickle product of some “unseen hand.” They are iterated. And they are intertwined, as described above.

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<sup>11</sup>And which was stymied by American objections.

<sup>12</sup>See for instance Shurmer, Lea (1994).

<sup>13</sup>Neoclassical thinking has evolved, it is important to note, various conceptual devices in its effort to cope with these phenomena. Among them are: externalities; scale, particularly in demand; monopolistic competition and economies of scope; and agency, particularly as expressed in asymmetric information flows and moral hazard.



Now we turn to use these ideas, both in their normative and in their positive forms. We begin by briefly looking back at the three global entrants, framing them in the new light.

## **2 The three global alliances – in the new view**

How do the three alliances appear, when set against this new perspective?

- DBP Telekom-France Télécom-Sprint

DBP Telekom has articulated a vision for Europe which, when taken globally, is in synchrony with a community of world competitors.<sup>14</sup> This vision proposes, among others, a single group of carriers where relations within the group are consciously a mix of competition and cooperation.<sup>15</sup> Whether this vision will translate to the new alliance among the three companies remains to be seen, but it is the path required by the new view summarized above.

The DBP Telekom position pretty clearly calls for a transition from the relatively casual correspondent relations which are presently the style for the industry. The new mode envisioned amounts instead to a social contract, which would effectively create a community of the companies. Looking again to Europe for an example, we can ask whether any European company may claim to have adopted this new style *internally*, within itself. But the European Union approach to leadership – where the head position in the hierarchy is handed around to each member of the group successively – is a vital element in the sort of power relations which are necessary.<sup>16</sup>

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<sup>14</sup>Throughout, I will unfortunately slight France Télécom's vision and role – the fault is mine, from inadequate information about France Télécom's current position in the partnership. To a lesser extent there is also a bit of information missing on BT and AT&T. Let me apologize in advance and look to completing the information.

<sup>15</sup>Dealt with in some detail in Allen (1994).

<sup>16</sup>Some would not find the outcomes in Europe satisfactory, and so demur from such an example. But the whole picture must be reckoned – for one small instance, the large lead which Europe's GSM enjoys in numerous contested digital cellular markets. Also, later examples in the paper will find these sorts of arrangements decidedly at work in other parts of the globe.

- AT&T's WorldPartners

AT&T has assembled a large array of partners, a group that is wider and more geographically dispersed, by a good deal, than the others. Is this too a new community?

We need to ask, what are the power relations, among the 11 who make up the WorldPartners group. AT&T's strength and market position stand out – it towers among this particular group. Except for three of the partners (and AT&T itself), the participants are carriers for a “re-industrializing” society; “second force” carriers, against already established incumbents; a new entrant; or principally hubs.<sup>17</sup>

carriers for a “re-industrializing” society

- the Philippines: Philippines Long Distance Telephone Company
- South Africa: Telecom South Africa

“second force” carriers

- Japan: KDD
- Canada: Unitel

new entrant

- Europe: Unisource

hubs, principally

- Singapore: Singapore Telecom
- Hong Kong: Hong Kong Telecom International

Telstra in Australia, and Telecom New Zealand International in New Zealand, are two partners with the market power which ex-PTT status, and universality, confers; and their base is an industrialized society. For some sense of scale in these two cases, the 17 million population of the larger [Australia] is roughly five percent of Europe, seven percent of the US, or 14 percent of Japan – though Australia's position in world affairs is a good deal larger than the relative size of its populace.

Korea Telecom serves one of the veteran Asian tigers, and with a population about two and a half times that of Australia. South Korea would compete with Japan; in selected market niches, it does so effectively.

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<sup>17</sup>“Re-industrializing” is a shorthand dubbed onto the Philippines as it (tries to) emerge from being the “sick man” of Asia, and South Africa as its polity constructs a new era. Though KDD is the quintessentially established carrier, NTT is the dominant force in the Japanese market. Though Telia in Sweden, KPN in the Netherlands, Swiss PTT Telecom in Switzerland, and Telefonica in Spain are each the established ex-PTT (or [likely] soon-to-be ex-) in its society, Unisource is today the entrant in Europe. (AT&T *itself* is the incumbent, but divested, holder of just a long distance franchise.)

— MAP 2 —



## AT&T's WorldPartners

by: market force

AT&T — [ex-] PTT, with universality,  
in an industrialized/ing society

AT&T — “re-industrializing” society, “second force”  
carrier, new entrant or hub

These appear to be the three strongest WorldPartner market positions, besides AT&T. None of this gainsays the WorldPartners position worldwide, of course – AT&T’s apparently commanding lead globally is our focus below. But AT&T towers over the group, without peer. Map 2 considers AT&T’s WorldPartners from the point of view of market force.

The question here is whether and what social milieu emerges for the partners. The question is particularly acute for WorldPartners, with 11 members (and there are 14 if Unisource is really four), since prevailing ethos becomes almost unavoidable with a sizable group. When seen from the point of view of its partners’ individual market positions, as Map 2 summarizes, AT&T’s role in the group could readily be interpreted as dominant.

On the other side, WorldPartners’ stated position is the reverse, saying that no single viewpoint can dominate. Further evidence is a terminology which has been adopted inside the company, that of “lead members” and “support members.” Lead members are those in regions with the bulk of multi-national companies – that is, the regions with the WorldPartners’ target market, but where the lead member likely needs support from the whole organization. This new division between lead and support is the emergence of hierarchy which *might* differ from dominance.

- BT-MCI’s Concert

So far this review (perhaps tacitly, but nonetheless) has inspected each group for the impact of the largest member. If we reverse the lens for Concert, MCI is the focus. Besides allying with BT which is the ex-PTT in the UK, MCI for other purposes has also partnered with the established incumbent in Canada, Stentor. Perhaps BT’s approach to MCI was no surprise, but MCI’s success with Canada’s established carrier does snare our attention.

That MCI was the partner chosen by both BT and Stentor signals to me that the MCI ethos may play a role. The MCI position is a charming mix of the rebel’s rhetoric from the days of McGowan’s breakthrough into US telephony *and* the community-oriented solidity of the staid AT&T *pre*-divestiture. This MCI vision can be defined relative to DBP Telekom’s. For MCI, the good regime is competition among *several* of

the DBP Telekom sort of groups. Thus, relations within any *one* group are to be the familiar mix of competition and consensus – “cooperatition,” to use MCI’s term.<sup>18</sup>

The prevailing culture in both Commonwealth countries, the UK and Canada – though holding much in common with the US – nonetheless has more “central tendency” than does the US, I am prepared to speculate. Such a central tendency is one seed from which forms of community might grow.<sup>19</sup> Overall, the billing in these two countries may go more to competition, while community and consensus proceed more at an implicit level. A parallel between MCI’s ethos and its allies’ cultures is certainly no more than suggestive, but the fit *is* interesting. With the two Commonwealth countries somewhere to the left of the US regarding the individual and competition, MCI’s position is somewhere to the right of DBP Telekom and a community of competitors.<sup>20</sup>

- The three taken together

We can draw the three points on this spectrum explicitly. When the three alliances are framed together, in this paper’s new view, BT-MCI’s Concert appears intermediate between DBP Telekom-France Télécom-Sprint and AT&T’s WorldPartners. DBP Telekom has effectively enunciated key elements of the vision implicit in the new view. AT&T, on the other side, appears potentially to be a dominant partner among a group that is now attaining some size, when dominance is anathema in the new view. [Though as already noted, there is evidence that WorldPartners may be moving toward a social structure which could be more consonant with the new view.] MCI [and BT ?] appear to be some mix of the two. Borrowing from a chart I drew in the earlier paper on vision, we can picture the three along a line (though without an adequate characterization for the AT&T vision, nor complete information about BT-MCI – these questions demand further research).

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<sup>18</sup>Again, Allen (1994).

<sup>19</sup>So might also a totalitarian regime.

<sup>20</sup>Also: Concert’s turn to local sales agents stands in direct contrast with WorldPartners’ taking local companies into the fold. In the new view, these are different strengths of linkage, at comparable levels of nested aggregation. To do that justice should make the new ideas operational, giving them concrete purchase; it also begins to mark the differences with, for instance, Coase/Williamson concerns – all the subject for an appropriate follow-on paper. (Quality of interconnection – the force driving this paper’s logic – is even at stake. Concert maintains that its approach to structure is superior, precisely on grounds that a unified network does not suffer the glitches native to WorldPartners’ “correspondent relations,” as Concert sees it.)

## Global Telecommunications: Structure and Regime

### Vision Alliance

<i>Community of competitors</i>	<i>Competing groups, which are...</i>	<i>[? Competition]</i>
DBP Telekom-France Télécom- Sprint	[BT]-MCI's Concert	AT&T's WorldPartners

But each of the three alliances have one quality in common – and it overrides the rest of the analysis. Each alliance implicitly has a structure of dominance itself, with one outsize, more powerful figure apparently in a position to command (in Europe, that is a pair). Put another way, these are *not* alliances among the major telcos themselves, as a group. Whatever public pronouncements might favor the new view, the alliances at present are not a community of competitors among the most powerful actors. Since an alliance among *that* group is the real subject of the new view, we cannot say that the process has really even started yet.

A final note: In the analysis so far the carriers from Asia appear not to take lead roles. Whether that is the case will be grist for our conclusion.

In this new view of the globalization process, the lack of joint work *among* the major telcos<sup>21</sup> stands out most starkly. That becomes the subject as we turn now to ask what we want.

### **3 What global industry structure do we want – the normative**

The ideology of competition – the wave that has swept the world's telecommunications communities – is clear: the ideal is several companies in vigorous rivalry with each other. But a community of competitors would see those same rivals joined from time-to-time as one monolith. In this vision the major telcos must be capable of acting as one, as well as rivalrously, for a global network. How do we sort out this disagreement?

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<sup>21</sup>France Télécom and DBP Telekom the exception, of course.

- Nested supplier communities

Does the new view argue for dividing the network geographically? No. Interestingly, each of the three new alliances has, for their own internal purposes, done just that: divided the globe geographically. In general one member does not operate on another member's turf when conducting the alliance's business.<sup>22</sup> So any of these models – if applied eventually as a global regime – *would* divide geographically. But particularly the history now accumulated with radio, notably cellular, makes clear that multiple operators are workable on the same terrain.

The question is not whether companies divide geographically, but whether the nested industry *communities* do so – whether the nesting is geographic. This is a challenging subject, worthy of some dedicated attention. Tentatively, the need for the supply side, the network, to reflect the peculiar varieties of usage from the demand-side – the geographically-based communities where we live and work – makes a powerful argument for geographic nesting in the industry. But the dramatic rise of electronic virtual communities – already with us over the ages *non-electronically* as diaspora, but now newly resurgent on the Internet – makes clear this is a complex question.

Such global nesting is a complex affair in its own right. At least three main levels seem likely, particularly if the new alliances are taken as some guide. The middle level calls for strong regional identity and organization, a firm regional entity situated between the domestic and the global – a Europe, a North America, or an Asia, as the industrialized examples. Such an arrangement – what otherwise would be called regional blocs – simply sharpens the contrast between this conception and received views on for instance trade theory.

How, then, would the arrangement in this new view operate? There may be multiple providers. But their emphasis, rather than some commodity service, is more on producing desired local variety, within some interconnectable standard. The principal competitive rivalry – which too is crucial – revolves around new ideas, for on-going variety...which, when we think about it, may be a fairly reasonable representation of experience. It is here that the received and the new views start to touch each other.

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<sup>22</sup>With the Uniworld joint venture in Europe, WorldPartners has taken first steps toward *joint* service for a piece of geography. This hints at the geographical nesting discussed just below.

- Spoilers

Just as undue exercise of influence – “monopoly,” in the extreme case – spoils the competitive ideal in the received view, so in this new view there is also a spoiler. Here however, the iterated dynamics are spoiled by a *refusal to play according to community routines for resolving differences*. The potential spoiler loose among the three new global alliances is the US government, with its inclination to use the DBP Telekom-France Télécom-Sprint alliance as a bargaining chip.

US government policy holds up the competitive ideal as the grail guiding, and blessing, its arm-twisting. But if the policy misfires, France Télécom and DBP Telekom may fail to field a viable global entrant.<sup>23</sup> That *could* hasten AT&T’s accession to global dominance – and so become a marvelously ironic squelch to prospects for any US *global* ideal of competition.

(If dominance is not the spoiler in the new view – but dominance nonetheless disrupts community – how is dominance treated in the new conception? The conclusion, below, aims to clarify a bit.)

#### **4 What global industry structure will we get – the positive**

Is it really reasonable to imagine repeated swings back and forth, sometimes the industry tightly linked together, at other times individual companies proceeding quite independently?

- The network firm

The industry structure – and dynamics – in Italy’s Emilia-Romagna region is perhaps one of the best-known “real live” cases. Japan’s *keiretsu* are also well-known (if not notorious, at least in classically liberal quarters). Virtual hierarchy – a network firm – takes on vibrant meaning in these places. The actors alternately assume either industry or company roles, depending on the occasion. Nor does technology guide the alternations. Technology in the form of electronic networks may support such organization, but it is

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<sup>23</sup>The years-long birthing pains for a telecommunications community in Europe could also be “spoiled.”



the human inclinations which surely take the first steps. (So, other societies with an interest probably do best to *start* with attention to their own cultural predispositions, before they then look to technology such as EDI.)

But if such highly developed practice is showcased more than it is found in widespread use, what can we expect for the global network?

- Reflecting on the future

While history is an inadequate reflection for the future, it can still be instructive (and really is all that we have). For the case of the global network future, consider two alternative paths from the past.

One is the history of AT&T's rise to the position of strongest carrier in the US (and indeed, on occasion, the world), a history that is now a century long but with salient features that are especially concentrated in a few decades just before and after 1900. At the time AT&T was in a fierce struggle with a number of quite scrappy carriers. But AT&T had special leverage in its hold on the US long distance network. Though many factors would be pertinent, AT&T was particularly able to use its discretion over long distance interconnection as a key lever to give it decisive advantage.

If we look back to Map 2, AT&T has begun to assemble a far-flung set of *internationally* long distance nodes. Though Singapore Telecom and Hong Kong Telecom International are "only" hubs, they both will continue for some time to enjoy monopolies on their transit traffic. The parallels with the domestic rise of AT&T are seductive.

But the other history is Finland's. It is an unusual case, one seen few other places, but therefore all the more instructive. In Finland, for reasons related in part to a Russian occupation, localities – and separate telephone companies to serve those individual localities – developed significant strength. A national PTT also developed, but to an important extent the PTT inherited the localities where extreme conditions most militated against affordable service. The PTT was responsible for long distance, as was typical for PTT's, but it was also responsible in the main for the more difficult, high cost local service. The denser local traffic, in the larger cities and more hospitably located regions,

flowed instead through the independent local companies. The result in Finland – rather than the rise of one dominant actor – is a facing off of true relative equals, the local telcos as a group on one side and the PTT on the other. And when the two sides need to settle a problem in common *between* them, the sauna is always available.

Consider Europe again: Europe's telecommunications community process shares some aspects of the Finnish experience, with relative equals sorting out the questions together. If *this* takes hold as the global path, rather than dominance there could be the prospect for a community of relative peers, able then to undertake the more complex dynamics necessary for a fruitful future, globally, regionally and locally. In a similar vein, Unisource – though it is indeed an entrant in Europe – comes on board in some senses peer to everyone else there, since Europe is really without any *European* incumbent. That, once again, is basis for robust community.<sup>24</sup>

Dominance or a community among peers – which do we get globally?

## **5 Power and community, the essentials – does Asia take a hand, too?**

The choice is between a balance of power *or* the power of community protocols. A balance of power may tilt and allow dominance. Community protocols on the other hand [the particular sort enumerated here, that is] explicitly address the power relations, reserving peer space for those who might otherwise be dominated.<sup>25</sup> Between them, these two alternatives bracket the essential contrast between the two approaches.

We may not yet be able to say which of the two we get globally, but we can notice where the latter – some would say novel – community approach is in fact being used.

- Europe

European examples have figured regularly in this paper to illustrate the community view. The intended ETSI IPR policy particularly pinpointed the community

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<sup>24</sup>Finland's history of strong localities – the definitive stamp of community – also parallels the new view that strong regional identities are essential for a robust global regime, a strong EU for instance.

<sup>25</sup>We see now why dominance is not the spoiler, in the new conception. Power relations are explicit in it, so the question of dominance is dealt with already.

dynamic. More generally, Europe has for some time pursued a dual policy – competition, to lower rates and improve generally, and also consensus, the opposite of competition, to bring harmonization across a crazy quilt of national protocols. This is the tensioned regime prescribed in the new view.

The European policy discussion typically has, we quickly note, *not* acknowledged the tension between the two halves of the policy. But that too is beginning to change. See for instance a recent paper from Oliver Stehman, DG 1, CEC.<sup>26</sup> The paper's discussion is concerned in part with European competition versus integration.

Indeed, the presentations of two papers which opened Europe's recent communications policy research conference<sup>27</sup> suggest that awareness of the basic tension may be accelerating in Europe. Jean-Claude Burgelman concluded by pointing to "two rival policies as the basis in Europe: one central, for infrastructure; the other de-central, for subsidiarity" [paraphrased from the talk].<sup>28</sup> Didier Pouillot, presenting for Jacques Arlandis, spoke even more directly to the point. He specifically contrasted policy for harmonization with policy for liberalization.<sup>29</sup>

- the US

Those developing the Internet in the US have evolved a "gift" culture, where hackers contribute their work toward a better network for everyone. The innovations are then taken into a process which rapidly evolves successive generations of protocols. This culture, and the process for rapid evolution, are part of the regime prescribed by the new view – this, despite the US avowed commitment to the competitive ideal.

But can we take the Internet as an exemplar to understand mainstream policy in the US?<sup>30</sup> Consider then the FCC, the most visible of the several (contending) *mainstream* institutions which set telecommunications policy for the US.

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<sup>26</sup>Stehman (1994)

<sup>27</sup>9th European Communications Policy Research Conference, 19-21 October 1994, Conegliano, Italy.

<sup>28</sup>Burgelman (1994)

<sup>29</sup>Arlandis (1994)

<sup>30</sup>Some mainstream *theorizing* about the Internet could parallel the new view. With their call for "smart markets," Hal Varian and Jeff MacKie-Mason (1994) have broached again that the economic margin in networks exists only for the longrun. Smart markets would be an auction for priority access during congestion; that could signal for capacity increases. *If* technological change is involved in the capacity

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In two major cases recently – for HDTV and then again for a spectrum plan to suit the LEOS<sup>31</sup> systems-of-satellites proposals – the FCC has followed *directly* the dictates articulated in the new view. For HDTV the FCC took fiercely competing rivals and, over time, encouraged and insisted that they form a single group, so that they melded the various ideas from their period of experimentation into one Grand Alliance. That is precisely the point of inflection in the new view, where as a group the industry settles on a standard (a standard with ongoing local variety, which in this case is the provision for both interlace and progressive scan). The FCC did the same thing with the LEOS contenders, to settle differences which had stymied a spectrum plan.

The US itself – the heartland of competition *ideology* – in actual *fact* is pursuing the tensioned policy that gives dynamic billing to consensus and competition together. Of course, dynamic structure as explicit policy is one result.

- Asia?

So far Asia has seemed not to take leadership in the globalization alliances. In fact NTT has pursued a policy of being steadfastly open to each global conduit. As already noted, NTT, in partnership with others, has to date arranged to carry both Concert and WorldPartners. This adherence to peer status for the actors is the cornerstone of the prescribed power relations. On the global stage, NTT, though quietly, is providing leadership in the operation of community.<sup>32</sup>

It is here, in Asia, that the first steps toward a true global telecommunications community of competitors may actually be underway.<sup>33</sup>

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increments, smart prices become part of the signal for an inflection to new consensus. Further, by *not* calling for per unit pricing, they leave scope for the “community pricing” now largely in use, where a surrogate for community, the user’s institution, pays a flat rate (whether Varian and MacKie-Mason accept either interpretation).

<sup>31</sup>Besides the several low-earth-orbit systems planned, there are also proposals for both mid-level and [high-level] geostationary services.

<sup>32</sup>[In the few days since this paper was finished, NTT has upgraded its relationship with WorldPartners to provisional member, with a trial period of six months. At the same time, NTT maintains its link to Concert, albeit the weaker sales-agent connection. Though the paper’s conclusions remain the same, NTT has stepped across a fundamental divide in the evolution of global industry structure. That impels the next iteration in this thinking.]

<sup>33</sup>Strong regional identity for Asia is another matter again. If that occurs, it will be some years away.

Dynamics, in this new view, are integral to telecommunications industry structure, iterated dynamics that are specified explicitly by policy.

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