CIMI Corporation
Bringing Focus to Technology

Connecting the User Experience

A special report from CIMI Corporation on the future of networks, and networking

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The last year has taught enterprises worldwide something they should have realized all along. Networks don't connect sites any longer, they connect **people**. Networks don't deliver "traffic", they deliver **experiences**. How can a network do any of that if it can't know who you are or what you're doing? It can't, and that means that we have to rethink how we do networks. The right place to start is with why experiences matter.

Productivity isn't generated by traffic, but by the delivery of **actionable information**. Government statistics and CIMI Corporation research show that about 40% of workers use IT resources in some way, and that a third of all workers use them regularly. New technologies for empowering these workers has generated every major wave of IT spending since the dawn of the computer age, so it's certain that empowerment goals will drive future technologies as well.

In modern times, empowerment has been delivered through networks. Whether they're in headquarters locations, branch offices, and even now at home, empowered workers are the engine that justifies communications. It's ironic that, in a network sense, we know nothing about them. We should, because what they do and how they do it is critical to ensuring that the network really delivers on its information and empowerment promise.

Empowered workers fit into two categories. Just over 70% of them run one or two applications, but their job performance is dependent on a single critical application. Take it away or interfere with it in any way, and they can't work at all. The other 30%, the "key workers", run five or more applications, and it's the combination of those applications that support their productivity. They can't lose any of those applications and remain full productive.

Both these categories need an **assured network experience**, but the second presents the greatest challenge. Not only do they demand more experiences to be productive, their unit value of labor is **five times** that of the first category. Since it's generally true that empowerment is most profitable where the employee targets have a high unit value of labor, the second group's traffic is critical.

Critical, but not recognized. To a traditional IP network or SD-WAN, all these workers and all their applications, from the critical ones to casual Internet use, are just IP addresses. So is the information workers are seeking; it could be customer order information or the latest weather report. When there's congestion or network failures, it's difficult or impossible to respond to them in order of the importance of the traffic to the business as a whole, because we can't identify the traffic and treat it in a way appropriate to its business value. Bits are just 1s and 0s, but the productivity dollars associated with them are wildly different.

Then there's the question of why our first category of worker limited to one or two applications? A big part of the reason, according to enterprises themselves, is that it's more difficult to support a large number of applications delivered to a large number of workers. We have to focus empowerment on a few, even though workers in the first category make up two-thirds of the total labor cost for a typical company. If these "average workers" could be supported effectively while using even just four applications instead of two, the data shows they could be 50% more productive.

How do you recognize the workers you want to empower, the application relationships that are critical? How do you support a mass of workers as easily as you can support key workers? It starts by thinking **sessions**, the relationship-based traffic generated by access to applications. That's why, from the very

first, CIMI Corporation said that the most important single property for SD-WAN products and services was **session awareness**. We picked 128 Technology as the leader in the space because they had the strongest feature set in that critical area. Most SD-WAN products offered no session-aware features at all.

What session awareness does is link connectivity to experiences. An application delivers an experience, one whose value to the business depends on the worker who receives it and the experience's impact on worker productivity. By being aware of sessions, 128 Technology is aware of experiences, and can assign them priority and even secure them based on full knowledge of the value of those experiences to the business. Session awareness means **explicit network value maximization**, and that's what justifies network spending in the first place.

The acquisition of 128 Technology by Juniper Networks, completed in the late fall of 2020, expands on this powerful value proposition. The primary goal expressed by Juniper when the deal was announced was the integration of 128 Technology's session awareness with Juniper's Mist AI. That's important because Mist AI is a quality-of-experience monitoring and support framework. The tag line on Juniper's website is "Unparalleled user experiences," and that's an excellent summary of Mist AI's goals.

Add in 128 Technology's session awareness, and it's now an even better summary of Juniper's goals overall. Add something that supports and assures QoE to something that lets you recognize key applications and users with unlimited granularity, and you have the foundation for the first **experience network** the industry has ever known.

In this new experience network model, a company can define key applications, key workers, key network technologies like Zoom, singly or any combination, and then handle the target sessions in the best possible way, giving them priority over resources, providing them with explicit support and problem resolution, and even perhaps linking all of this to the behavior of the underlying network, creating the first true vertically integrated view of services, a view that crosses all the OSI layers and all geographic, hosting, and access technology boundaries.

All the benefits empowerment can bring, all the workers who could be touched by productivity gains driven by IT support, are devalued if the experience they depend on isn't supported and assured. The sheer number of workers, applications, and experience relationships modern IT has created make support of empowerment goals so challenging that many companies have simply given up and accepted best-efforts behavior. That ignores the fact that experiences don't have the same productivity value, and workers don't have the same unit value of labor.

Juniper's Mist AI and 128 Technology can also address the at-home and mobile worker challenge. 128 Technology's session-aware SD-WAN service can extend secure networking to a home worker by adding the worker to a branch VPN, and the same approach can also serve mobile workers in airport lounges or hotels. Add Mist AI and the company can support those workers just as if they were on the company VPN. CIMI Corporation and government data show that experience-network empowerment could improve the productivity of fully remote (WFH) workers by a third, and highly mobile workers by an astonishing 68%.

Traditional support breaks down when more workers are remote or mobile; companies can't dedicate professional network support personnel to anything except a large site. With Mist AI, support follows

workers to wherever they are, wherever they need to be. With 128 Technology, so do secure, prioritized, connections to their experiences.

The ability to support workers anywhere means that Mist AI and 128 Technology can combine to provide support and assurance even for customers and partners who use web portals into a cross-application information set. Companies have grown more and more dependent on these outside-the-workforce experiences, and delivering and supporting quality of experience is a critical extension to traditional company networking, an extension now supported.

All this shows that the experience network created by 128 Technology's session awareness and Juniper's Mist AI support and experience monitoring really do take networking to another level, the level where it really should have been all along. Sites aren't productive, they're simply places where workers are concentrated. Why then focus network technology on connecting them and not the workers? Especially when so many workers aren't in traditional sites any longer, and will likely never be there as often as they were before.

A great idea is still just an idea unless you can bring it to buyers. In many cases, companies that need experience-based networking the most are companies that have a hard time building and sustaining their own networks, even with strong AI support. The benefit to enterprises that the experience networking can bring are significant, but so are the benefits the model could bring to communications service providers and managed service providers. Managed services are usually sold based on presumed better management economies of scale relative to the user, on user lack of skilled technical support, or both.

With experience networking, a CSP or MSP can sell a service that directly supports productivity, and support the delivery of empowering experiences to all candidate workers, no matter where they are, how many there are, or how tech-savvy they might be. That's a much better story to take to a buyer CFO than one based on simple, best-efforts, connectivity. Better yet, the Mist AI support lets the service extend to all empowerable workers without exploding management cost, which makes it possible to sell managed services at a lower price and still sustain good profits for the MSP/CSP.

Networking evolves based on technology changes that result in an increase in **value**. The ultimate value for any technology tool in business comes from empowering workers, partners, and customers. The combination of Juniper's Mist AI, and their acquisition of 128 Technology, creates a model that can **identify and support** both the information users who are targets of empowerment, and the applications and information that enhance their productivity. That combination shifts, at long last, the focus of networking from moving bits to delivering experiences.

This could be a revolution in networking, and a revolution in productivity, and that's why it's so important. It's as simple as that.