

The Circuits Circus

Managing a telecom network sometimes feels like managing a circus – but the right software can tame even the wildest beasts.

By Rachel Gulliksen / *Mapcom Systems*

Though I wasn't doing death-defying stunts with lions, I occasionally referred to myself as "the ringmaster" when I turned up a new optical carrier (OC) ring. Awful jokes aside, managing a circuit network can feel quite a lot like wrangling wild beasts or handling a three-ring circus without the right tools to stay on track, not to mention sane.

PHYSICAL INVENTORY

How many times have you run to the grocery store for an item you already had at home? I do this more than I would like to admit. If I inventoried my pantry before creating my shopping list, I could prevent this problem. Taking inventory of the hardware needed to deploy circuits is even more critical. Buying an extra can of peas wastes only about 75 cents, but buying an unrequired optical transceiver can waste thousands of dollars.

Purchasing only the equipment needed immediately increases available monetary resources. And if you don't have to use up the outdated surplus equipment you bought by mistake, you'll be able to purchase the latest models when the equipment is needed.

BUILDOUT

Understanding what is already deployed in a network improves the potential for network expansion. My husband and I recently decided to add a new room to our house. Everyone in our family had suggestions about what type of room to add and where to add it. After arguments, tears, battle lines and an eventual group hug, we settled on a sunroom off the

kitchen because the kitchen area had the greatest amount of activity and occupancy. A digitized circuits network can provide the same clarity of direction for a capital buildout – it reveals just where the major traffic is and where the service area will grow in the future. A revenue-maximizing software module can build on the circuits assessment to maximize the results of a new network build.

Tracking circuits individually and projecting the circuits network as a whole makes it possible to mark concentration points and target potential customers. The mapped-out circuit deployment structure shows which potential customers could be served with the least buildout, based on existing facilities already in the same area. A map of an established circuit network can also help answer any questions on serviceability for new customer requests.

OUTAGES

At my company's last conference, I gave four workshops on outages. In each session, I asked attendees to raise their hands if they had ever been involved in an outage restoration. Not a single hand was left down at any session. Outages will happen, and you need to be ready for them.

One way the FCC assesses outages is by measuring the circuits affected in terms of bandwidth and services disrupted. A digitized map of active circuits, linked to a database with extractable circuits information, enables an operator to immediately identify and localize an outage. Subsequent reporting becomes

easier and more accurate because all departments involved in the restoration can use a single database.

As a new circuit is digitized, priority assignments can be created and linked to outside-plant facilities. When a cut outside fiber is repaired, the technician can reference a circuit priority report created by the database for a restoration repair hierarchy. You can't look at a fiber strand and see the OC-48 backbone riding on it, but on a restoration report, you can. Rapid circuit restoration avoids costly fines, a tarnished company image and community vulnerability.

REPORTS

Save the planet, save the trees, save the money spent on printer ink. The right software enables the creation of reports in an electronic form directly from a project. Digitizing a network creates a database whose elements can be configured to any type of report. Think of each piece of data as a Lego block – use the blocks to build a racecar today and a space shuttle tomorrow.

Circuits data can yield several key reports. For example, a comprehensive report of the entire circuit database, filtered by equipment, would show which vendor's equipment is best suited to the network.

Another key report could help resolve the "minivan vs. Mini Cooper" debate: To transport several people over a short distance, one minivan is better than several Mini Coopers. (Though it may work for clowns, in the circuits circus, shoving all the circuits into one small vehicle is not an option.) However, if one or two people need to travel a long distance, the Mini Cooper is more efficient. Managing circuits can follow the same logic, so reporting data can help determine whether coarse or dense wave-division multiplexing is more appropriate.

A report using circuits data joined with workforce tracking data can show how much capital time is spent on billable services. This type of report can show which geographic areas need more or less coverage and help redistribute assets as needed. All these reports can

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make a circuit network, and a company as a whole, far more efficient.

ONE CENTRAL SOURCE

Imagine you are starving and get in your car to drive to Arby's for a delicious roast beef sandwich. As you drive along, the road abruptly stops. Now you have to park your car and catch a bus to continue on your path. The bus takes you a mile from the restaurant, leaving you to ride a bicycle to complete your journey and satisfy your hunger. Sounds absurd, doesn't it? For a telephone company to use different software sources for each department is just as absurd.

For example, if each piece of information needed to fulfill a request for a DS1 is housed within a different application, the telephone company is just like the famished person trying in vain to reach a meal. Things could be even more complicated if, at each stop, a different person is required to complete the next leg, relay-style.

What if there were a single source everyone could reference, akin to a single paved road in the analogy? No more stopping and starting, jumping from one software application to another or trying to create a single path. Instead, fulfilling the customer's request for a DS1 would be greatly simplified. Having a single circuit and network database solution eliminates disorganization and creates harmony across a company. It prevents toes from being stepped on – and as we all know, those little piggies can be sensitive.

A central source for circuits also keeps data accurate. The foundation data for a new client's circuits project already comes from diverse sources. I have mined information from traditional engineering software such as AutoCAD and from notes scribbled on a napkin. Too often, circuits material

is stored in a single person's memory. Digitizing with comprehensive software extracts all the relevant pieces of information, eliminating discrepancies, breakdowns and missing segments. This is especially critical when a circuit is modified or changed. A digitized circuit can be referenced to see not only the modification but also the date the circuit was changed and who was responsible.

THE BIG PICTURE

Mapping and digitizing circuits reveals a picture of the network at large. Keeping circuit information in piece-by-piece diagrams makes it almost impossible to see how the circuits join together to form a larger network. Imagine trying to travel across the country using only county-level maps. You would have a difficult time seeing where you were or how far away your destination was. Similarly, tracking a transport ring can be accomplished by pulling each node-to-node layout document, but seeing that ring mapped out using a fiber network gives a user a clearer birds-eye view.

With all the benefits the right software can bring, why not take your network to the competitive level and digitize? Leading-edge practices are the lifeblood of a successful telecom company, just as new acts are for a circus. To keep existing customers and draw in new customers, it's imperative to stay relevant. Once the digitized network is in place, grab your popcorn, sit back and enjoy the circuits circus! ❖

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