

What a year 2020 turned out to be... 12 months ago, we carried on with our lives as usual and there were few clouds on the horizon. The economy was growing at a steady pace, business was thriving, and the world was full of optimism after years of prosperity.

Come January, we started to get the first glimpse that 2020 would turn out to be a very different year; one that will go down in the history books as the worst pandemic in over a century. As we all tried to adapt to a new reality, the one thing that stood out as more critical than ever before for communities in various stages of lockdown was access to the Internet. Networks are an essential tool to keep people, governments and businesses connected, informed and protected as we navigate these new and challenging times.

Comtech EF Data put the health and well being of our employees first and quickly transitioned to remote working for those who could and provided a safe and secure environment for our staff who were needed on-site to keep our factory running. We are incredibly proud of how everyone at Comtech EF Data responded and stepped up to the challenge and contributed to make the transition smooth for our customers, partners and suppliers.

While some initial slowdown in the business environment was inevitable as we all focused on flattening the curve, the need for connectivity around the world didn't skip a beat and that was also reflected in the mix of products Comtech EF Data supplied. As businesses, schools and governments transitioned to the new reality built around the Internet and Zoom meetings, the traffic in our customers' networks went through the roof.

Reports from industry analysts that measure Internet traffic highlight huge increases, such as in **Sandvine's Internet Phenomena Report** that reported total Internet traffic had increased 38 percent since the start of the pandemic, and the uplink traffic alone grew by 121 percent, largely as a result of the growth in video conferencing and social networking.

Similarly, **Ericsson** highlighted in its Mobility Report from June that the traffic load in mobile networks had shifted from city centers to residential and rural areas as people transitioned to working from home. As networks are designed based on predictable usage models that factor in busy hours and application mix, many operators struggled under this unprecedented and rapid shift in traffic and some applications like streaming services had to be temporarily throttled in some markets to avoid congestion.



Remote working.

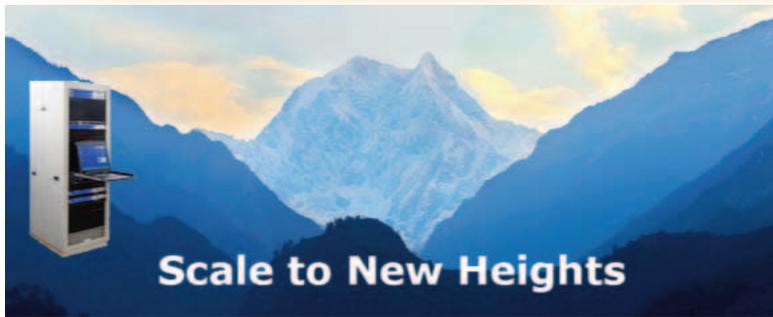


Internet of Things.

As many of us in the satellite industry know, rapidly changing traffic conditions is something we handle best and Comtech EF Data, through our partners, helped many customers deploy or augment and increase capacity where it was needed to support health care workers, first responders and other essential workers as they tended to the pandemic. Kudos to Comtech EF Data, our partners and the rest of the satellite industry for yet again stepping up to the challenge and helping people in need.

While the full economic impact is yet to be understood and we certainly do not want to downplay the devastating effects the pandemic is having on society and human loss, the impact on the telecom and satellite industries may be less than during the two previous recessions in 2001 and 2008.

First, today we are in the middle of a technology transformation where as a society we are more dependent on, but also benefitting from, the Internet economy more than ever before.



Online shopping for hot commodities like toilet paper, face masks and hand sanitizer, banking and other digital services is second nature to most of us today while it wasn't a decade or two ago.

Secondly, the positive momentum around 5G as a once in a lifetime opportunity for many industries is especially encouraging and fuels large and early investments in infrastructure like was never experienced when 3G or 4G first started off.

Lastly, over the last two decades, smartphone penetration has proliferated and consumer behavior around willingness to pay for content and connectivity has changed and digital ecosystems are taking up an ever-larger part of people's budgets and mindshare for good reason — it makes life better and more interesting.

Governments and regulators have also come to realize that connectivity is a basic human need and are accelerating their policies and plans to close the digital divide and make access to the Internet as important as access to clean water and electricity.

If we look toward the future, it is likely that during 2020 we have taken greater steps towards a fully online and digital society than ever before and made changes in behavior and culture that will last for generations to come. Things will never be quite the same again, but there are many reasons to be optimistic.

Access to and the use of digital services and applications opens new economic and social opportunities for all of us and makes societies more robust and resilient. Let us just be sure as we go forward that we include everyone, including people in rural communities and developing countries in this exciting and important journey of change.

Far too many people around the world still cannot afford service or lack access to basic connectivity and satellite is an essential part of the solution.

Comtech EF Data introduced some new products and features during 2020 that we are especially proud of to support the need for high quality and high-speed connectivity everywhere.

Our **Heights™ Networking Platform** continued to make inroads as the premier solution for high quality, low latency/jitter mobile backhaul. In addition to supporting mobile broadband in underserved communities, the Internet of Things is a use case more MNOs and service providers are starting to address for agriculture, mining and energy markets.

This demonstrates that there are many interesting opportunities in the crossroads between the telco, satellite and adjacent industries and basically anything that can benefit from being connected one day... will be.

Our high-speed SCPC modems, along with the innovative technology for TCP/GTP optimization and load balancing across satellites and transponders developed by our subsidiary, Memotec, had several nice wins during the year and we continued to extend our lead in most capacity deployed in support of trunking over satellite.

Finally, our RF portfolio has been updated with some new amplifiers as requirements are trending towards higher powers reflecting ever-growing throughput requirements. Customers are recognizing the benefits/drawbacks of various amplifier technologies (GaAs/GaN/Tube based) and are asking more of the "correct questions."

Comtech continues to offer a growing solution set for all technologies and we look forward to continuing to help customers identify the best solution for their RF challenges.



CDM-570A, CDM-625A and Memotec Equipment.
Image is courtesy of Comtech EF Data

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Senior Vice President, Premium Enterprise & Mobile Operators, He leads the market development and direction for the telecom and enterprise markets, directing long-term strategic initiatives and defining solution suites and feature sets.