



The Model 1000 is now the satellite industry's benchmarking product for monitoring satellite transmissions and for detecting interferences. Photo courtesy of Glowlink.

Glowlink – the best kept secret in the industry



Glowlink provides innovative, affordable satellite monitoring and power control products to support the efficient operations of satellite-based communications networks. Based in California, the company is led by Jeffrey C. Chu, the co-founder, Chairman and CEO of Glowlink. Helen Jameson spoke to him about Glowlink, its products and the future.

Question: Can you begin by introducing Glowlink to our readers and to explain a little of the company's history please?

Jeffrey Chu: Glowlink is satellite industry's best-kept secret and in the words of one of our customers, "the little engine that could."

In truth, the company was founded in January 2000 by engineers and business executives in a region of California known globally as Silicon Valley, which is to high-tech what Bordeaux is to fine wine. Our vision is to build innovative and affordable solutions



for satellite carrier monitoring and interference detection using the latest technology, and sell them to both the commercial and military markets.

At the time, these type of products were considered high-end and only the military could afford; but we were relatively certain that if we could bring the price down with equal or better features, the commercial side would pick them up sooner or later. Lucky for us, that is indeed what happened.

We entered the market with the Glowlink Model 1000 satellite monitoring system, which pioneered the commercial application of Digital Signal Processing (known as DSP by engineers) to the satellite arena in a extremely cost-effective way.

The Model 1000 is now the satellite industry's benchmarking product for monitoring satellite transmissions and for detecting interferences.

It also became the launch pad for our newest entrance into the satellite management field - the Model 8000 - used for detecting and geolocating interferences, an increasingly serious problem affecting satellite transmission worldwide.

Today, Glowlink is a well established company with a stable customer base around the globe, well regarded for its products and services.

Glowlink is also known for being a good place to visit. The company is located in the San Francisco Bay area, in the proximity of world-renowned Stanford University and the University of California, Berkeley. Business and technical people love to drop by, the former for the California wine country and the latter for technical immersion. Or vice versa. So it all works out.

Question: Can you please tell us more about your new product – the DSP-based Satellite Interference Detection System and its benefits?

Jeffrey Chu: You are correct in calling it new. Actually our DSP-based Satellite Interference Detection capability has been embedded in the Model 1000 from the very beginning. But it is absolutely new in the sense that it is still the only product on the market that has state-of-the-art technologies that meet customers' new and evolving needs.

The key advantage of DSP based interference detection is that it is fast and accurate, allowing you to peer underneath a carrier to see what is interfering with the traffic that it is carrying, while the carrier remains on-air. This is significant because otherwise the satellite operator would have to turn-off the channel to see what is going on underneath.

Try imagining the situation where someone is broadcasting the European Cup soccer final on TV and needs to see what is interfering with the broadcast channel

because the audience is complaining about picture quality.

Prior to the Glowlink product, you would have to turn-off the broadcast to see what is inside the channel. There is no other option. The audience would not appreciate that too well, would they?

In addition to looking underneath a carrier, this technology can also be used to detect other unauthorized carriers such as pirate signals, characterize them completely, and then forward useful information to the affected satellite operators for follow-up action.

A very interesting marketing phenomenon about the Model 1000 is that our customers are constantly finding new applications for it. For example, recently one of our customers used a unique feature of the product, which was actually designed for automatically detecting transponder compression problems, to trouble-shoot ground equipment. As a result, this customer now has a tool to tell them instantly when there is a ground transmission problem. We constantly hear about success stories like that.

Question: Due to the nature of this product, you obviously do a lot of business with the military market but which other users purchase this particular product?

Jeffrey Chu: Yes that is correct. Besides the military market, we also have a good "toehold" in the commercial sector. This includes satellite operators, broadcasters, media, oil and gas companies, and so on; just about anyone who uses satellite bandwidths and is serious about maintaining the integrity of their satellite traffic has purchased this product.

Question: Your other area of focus is obviously geolocation. Can you tell us more about the products you offer in this area?

Jeffrey Chu: The product we offer for geolocation is the Model 8000. This product was introduced in July of 2006 and is aimed directly at solving the increasingly common problem of satellite interferences and finding unauthorized users of satellite bandwidths.

It was designed with three key objectives in mind: compelling features and performance; easy of use; and affordability.

The Model 8000 is the first geolocation product on the market using DSP technology. As an industry first, it has built-in carrier monitoring and interference detection. These attributes dramatically improve system performance, with orders of magnitude increase in speed and accuracy.

The integrated carrier monitoring and interference detection also make the system easy to use, and the geolocation process vastly simpler. The Model 8000 is also full

integrated with Google Earth, another industry first that offers unmatched visual search for an interferer.

On top of all these, the Model 8000 is priced at a fraction of other geolocation products available on the market, even with the inclusion of carrier monitoring and interference features, making it almost irresistible.

In terms of success stories with this product, they are many, and some quite compelling.

One involved a major international satellite operator with a major customer whose traffic had been interfered with for over a year. Repeated attempts to geolocate the interferer had all failed using different geolocation products on the market. They turned to Glowlink, and we helped them install the Model 8000, locate the interferer, and resolve the situation, all in one week. What perhaps was even more interesting is that this resulted in a worldwide recall by the manufacturer whose transmission equipment had caused the problem. So the problem was affecting other satellite operators and users as well.

So this ended up helping the entire community. Obviously, this particular satellite operator benefited the most, since they now have more bandwidth that they can sell, and the credibility with their customers of guaranteed pristine bandwidth.

Another success story involved a transmitter out of nowhere that knocked out transponders on satellites over the entire North American arc for days. A customer turned to the Model 8000 and within a few geolocation runs pin-pointed the offender (it was an inadvertent transmission) and resolved the problem - for the entire community of satellites in the arc.

The Model 8000 is truly an exciting, yet extremely affordable product. It has met all of our original product objectives, and the market seems to agree: the Model 800 is the hottest selling product in the company's history, equally popular with military and commercial customers.

Question: How important is the Asian market to Glowlink? Do you do much business there and which other markets stand out for you in the rest of the world?

Jeffrey Chu: Glowlink has been in the greater Asia-Pacific market since the beginning, both as direct sales to the region as well as installation for customers who have ground stations there. We continue to serve this market and are seeing some new and interesting developments there, especially with regards to interferences and finding the offenders.

We are also seeing strong interests for our products coming out of Latin America, Europe, the Middle East, Africa, and the Oceanic region.



Question: Service and Support are obviously two words high on Glowlink's agenda. How do you achieve a consistently high standard of service for the customer?

Jeffrey Chu: By listening well to the customer's needs and concerns, and by anticipating what those may be—often before the needs and concerns arise. At the same time, we also make our products reliable, easy to use, and simple to maintain, and that cuts down support costs for our customers.

Another key factor is people. Glowlink is fortunate to have a rich base of knowledgeable and experienced people with the right mix of scientific, engineering and support expertise, all in-house at Glowlink. This readily available knowledge and skill set allow us to tailor specific service and support that accurately meet each customer's specific needs.

Question: In terms of research and development, are you working on any new additions to the Glowlink portfolio?

Jeffrey Chu: Yes, we are working on a number of interesting product initiatives. A good example is the recently introduced "synchronized" spectrum monitoring product that we have just shipped to our US military customers.

Synchronized monitoring is crucial for any satellite that is designed to provide flexible and diverse services. We believe this is where satellite-based services are headed.

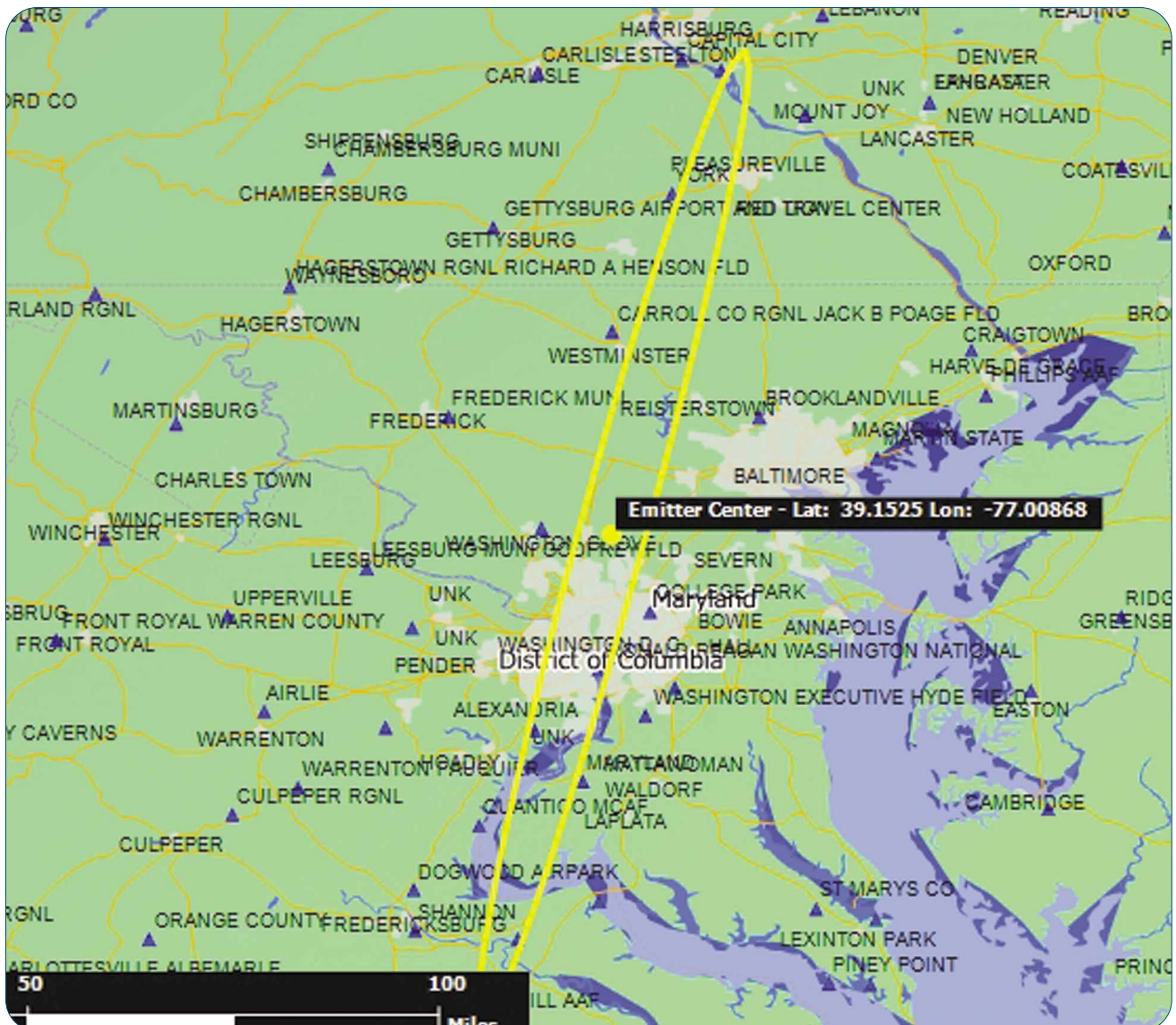
As a result, this new monitoring technology will become an indispensable part of any commercial satellite control and monitoring infrastructure. So that is a very exciting development for us.

Question: How do you see your business evolving in the coming months and years?

Jeffrey Chu: We have a fairly deep penetration in both the military and commercial market, in terms of overall system deployment and the sheer number of systems installed in the field.

That provides the company with a rich installed base for both products and services growth going forward. Currently we are running about 50-50 in terms of product sales versus service type of sales.

In the next two to three years, we are forecasting that mix to shift more significantly toward the service side, not because equipment sale is going to slow down, but because the service side will grow even faster. Already, we are working on a number of business opportunities that are in sync with that view. So it is definitely an exciting time for all of us at Glowlink.



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