



Awake at the Wheel

Heading up the world's largest sleep diagnostics company is not always easy, but the chief of Embla is committed to gradual improvement that makes changes easier for customers.

Embla CEO David Baker continues to build upon his iconic brands through subtle tweaks designed to boost performance while minimizing disruption to his customers. It is a process the former naval architect initiated when Embla® Systems acquired the Sandman® sleep diagnostic product line from Covidien®. At the time, industry watchers wondered if Embla's REMbrandt, RemLogic™, and Sandman® PSG software would be consolidated. The answer is a definitive "no".

Baker relishes navigating new challenges in the corporate world. As a former designer of ice-breaking vessels in the Canadian North, he has a knack for going where he wants, even if the weather ahead gets nasty. After all, when two sleep diagnostic companies come together forming the largest in the world, it can't always be smooth sailing. On paper, Embla acquired the Sandman sleep diagnostic company from Covidien, but Baker is quick to note that the first consideration must always be the customer, in this case, *a lot* of customers. Indeed, the combined company became the world's largest to focus entirely on sleep diagnostics with close to 1,700 customers in the United States, and over 2,500 worldwide.

During his nautical career, Baker oversaw a monitoring system that measured the pitch, roll, and surge of ships, initially supplying vessels in the North Sea off Scotland and later in the Canadian Arctic. One of Baker's programmers knew a technician who worked at the local hospital. "He was late for a meeting at the pub," says Baker with a chuckle. "He went to find him, and ended up in a sleep lab".

Baker eventually helped the sleep lab digitize its records, providing them with a data acquisition system that replaced paper. Along with his associates, he started Melville Software, which created the "Sandman" product in 1992. The following year, Baker released the Sandman system in the United States, and Nellcor purchased Melville Software in 1995. The parent company then changed hands a few more times before Tyco Healthcare bought it in 2000, Baker left in 2003 and in 2007 Tyco became Covidien. The circuit merged again when Baker joined Medcare in 2005, which would later be renamed Embla which purchased Sandman back from Covidien in September 2009.

While additional acquisitions are always possible, Baker is wary of biting off more than he can chew. At this point, the emphasis is placed on the customer and maintaining strong technical support. "With that said, the organization is always looking to grow, and we are looking at new technologies and

new opportunities," adds Baker, "Remember that sleep as it exists today is a 30- to 40-year-old technology. The type of testing you do now is similar to the type of testing you were doing many years ago. I think our growth is going to come from continuing to make people aware of what sleep is, and make it easier for people to access sleep studies."

Altering the Engine

With so many customers and three distinct software systems, the challenge is to allow them to continue using their software so that they are not forced to re-train while maintaining efficiency of the development resources having to support more than one system. The long term strategy that Baker envisions is to keep the software the same as it is today in terms of what the user sees, but improve the performance and compatibility of software engine that drives all three systems.

What customers see when they work with any sleep system is the Graphics User Interface (GUI) – the "buttonology" of the software and how they navigate. The largest impact on a user would be to change the GUI, which is unique to each software product. However, there is also a part of PSG software that users do not see, the "Engine" that does much the same thing for any system; collecting, viewing, analyzing and storing data. Given these two components, the GUI and the "Engine", the process proposed by Baker is to maintain the existing three user interfaces and functionality but combine the three software engines. "Without impacting the look or feel of any of our PSG software programs, my vision is to harmonize the 'back end' of each product over the next couple of years, leaving the 'front end' alone," explains Baker, "With one of the largest installed bases in the world, having a single file format, for example, is easier for research, sleep lab consolidation and general compatibility. I also plan to improve the report functionality and improve the automated analysis modules. Common file formats, improved reports, better modules and other features can all be accomplished across platforms without impacting what the sleep professional sees when the software is running.

Another important step will be to bridge the three PSG programs so that they interface with Embla's Enterprise® Sleep Business Management software. The company's Enterprise Business Management software helps customers improve efficiency by automating time-consuming tasks that were manual. Numerous sleep labs use Enterprise to manage their work flows and achieve efficiencies. Hospital based sleep labs can also link to the Hospital Information System (HIS) through "HL7", an industry standard communication protocol.

The Future

Veterans in the industry may recall the “Hard Rock” Sandman customer appreciation parties. Embla brings back this legendary bash to San Antonio this June for its newly merged customer base. Baker concedes that big organizations have been shying away from these types of parties, but the Embla chief wants to say thank you—no strings attached—and show customers he appreciates their business.

As for technology on the horizon, Embla engineers are looking at the company’s cardiopulmonary coupling (CPC) tool, and how it will contribute to the field of sleep. “This is the technology we licensed exclusively from the Beth Israel Deaconess Medical Center, an affiliate of Harvard Medical” says Baker, “It allows you, with a single channel of ECG, to phenotype different types of sleep apnea. The CPC™ module creates a single image of sleep that allows you to differentiate types of sleep apnea and, just as importantly, the ‘Quality’ of patients’ sleep. At the moment, this is implemented in RemLogic. We plan to integrate the tool within our other PSG applications as well.”

With a global presence, the company has dealt with home sleep testing extensively as the home approach is the norm in many countries outside the US. “The Embletta®, our portable sleep testing device, has been around now for about 7 years,” says Baker, “We estimate over a half million studies have been performed using that device. So home sleep testing is something that Embla has been doing for many years. With

our experience in Europe, we think we are incredibly well placed, and more so than anybody else, to offer devices in the United States. We also recently came out with a new and improved version of the Embletta, the Embletta Gold™, which is now available in North America, after a successful launch in Europe last fall.”

Embla continues its very successful involvement in dental sleep medicine with its exclusive dental distributor, Sleep Group Solutions (SGS). SGS holds informative seminars to educate dentists on the importance of sleep, and how they can partner with their community Sleep Labs to help treat more patients using sleep screening tools like the Embletta®.

In addition, occupational health is a key area of growth. Trucking companies, for example, represent a growing market that would benefit from portable sleep testing. “The more we understand about sleep disorders and their impact on the ability to work, I think the better off we all are,” says Baker, “Occupational Health, looking at the Trucking Industry and Dental Sleep Medicine are just two areas of this which I think are going to lead to other areas as more and more people recognize that sleep is a pivotal part of our health and well being.”

David Baker, President and CEO of Embla Systems is based in Denver, CO. He can be reached at david.baker@embla.com. For more information on Embla, please visit www.embla.com.