



Movers & Shakers interview with Sean Booth, Manager, RIS Research & Development, Carestream Health



Biography:

Sean Booth is responsible for the management of the RIS research and development site in Prince Edward Island, Canada, and is Technical Project Manager for the Carestream RIS v11 product. He oversees two RIS development teams and the RIS Quality Engineering team and manages the development and quality engineering resources, timelines and feature functionality for the Carestream RIS v11 product.

Mr. Booth has 17 years of experience in IT, software engineering and engineering management. During his six years with Carestream, he has been the R&D Lead for new country launches including US, Brazil, Mexico, Australia and the Athens Olympic Games.

Prior to working with Carestream Health, Mr. Booth was Director of Development for NBS Technologies Inc., an imaging/information systems company in Montreal, Canada specializing in identification and smart card systems. Mr. Booth ran an information systems/digital imaging startup for five years.

Mr. Booth's education includes degrees in Computer Science with a minor in business from Concordia University, Montreal, Canada, and in Computer Applications Engineering and Microcomputer Systems, both from the Institute Superior d'Electronique in Montreal, Canada. He holds one patent and has three patents pending, and he is a Certified Member of Health Level Seven (HL7).

The following interview with Sean Booth was conducted by HealthTech Wire editors Nina Wittrock and Armin Scheuer (www.healthtechwire.com) on behalf of Frost & Sullivan.

HTW:What process has your company undergone in recent months to develop from a Kodak business unit to the independent company Carestream Health?

BOOTH: Kodak has been a radiology company for 125 years, mostly through the use of film. However, Kodak wanted to focus on key areas of strength such as commercial film and printers. So when the decision came to explore alternatives for the healthcare division, we carefully evaluated the companies we potentially wanted to team up with. We were looking for a company which shared our customer-centric approach. Did they want to invest in innovation; did they want to provide us with a support and management structure that would enable us to grow in the areas we have identified as growth areas? Carestream is now a private wholly-owned subsidiary of Onex, thanks to whom we are well placed to succeed on the market.

HTW: In the field of Radiology Information Systems (RIS), for which you have received Frost & Sullivan's Market Penetration Award, what is the mission and vision of Carestream?

BOOTH: Carestream Health is devoted to customer value and enhancing and expanding its portfolio of solutions by listening to customers and involving them in the development process. This approach clearly sets us apart and allows us to excel. Our high-level market penetration is a direct result of how well we look after our customers and of the innovation that goes into our products. We have incorporated customer needs into our development cycle, which we have shortened by meeting regularly with our customers. This allows us to promptly provide our customers with the features they want in the way they want them and, consequently, we get things right the first time. Carestream Health wants to drive rather than be driven by the RIS industry. This allows us to make a big difference – for us and our customers.

HTW: What are the key customer requirements of an RIS?

BOOTH: Initially, a RIS was primarily seen as a piece of software for storing patient data and analyses. Today, the RIS is all about driving efficiency in the workflow, whether in a public or a private healthcare system the need for efficiency is greater than ever. So we designed a RIS that is versatile enough to adapt to an organisation's needs and workflow.

So we didn't create a static RIS and force an organisation to adapt its workflow to our RIS; rather, we aim to increase their efficiency by providing a RIS that works the way they work, thereby achieving genuine operational efficiency. The Carestream RIS differs from other products in that it encompasses the entire workflow - from referring physicians, schedulers and admissions through to reporting and dispatching. Our RIS also time-stamps all the events during a consultation - every time a patient is dealt with or examined. This helps to acquire business intelligence and allows us to analyse the business and improve processes at any stage of the workflow.

HTW: What kind of tools and functionality do you offer for boosting efficiency?

BOOTH: A big advantage is the ability of a product to adapt to the workflow. As patients progress through a facility, they go through different stages from order taking and examination to reporting. Our system is able to adapt these statuses and adapt the workflow to the requirements of each stage.

Secondly, the information that is entered into the system can be adapted for the customer. We can help facilities decide what information they need to capture and to display. By the time the radiologist works on a case, all the information is available on screen. They do not have to click to get patient data. We even incorporate results from external systems such as laboratory or pathology systems.

HTW: How do you integrate with external systems such as a hospital information system?

BOOTH: In terms of our RIS we have been very active with some of the IHE initiatives, allowing us to share information with a predetermined set of rules and roles between various healthcare applications. We also take a holistic approach to customer problems, as many of them are not singularly directed towards a specific product. A radiologist needs the information in order to read an exam: the imaging information and toolset traditionally located in the PACS, the patient demographics, the exam information, PACS notes and so on. Carestream focuses on marrying all of these products so that we can offer the customer a single solution. If you're going to fulfil the needs of the customer you cannot afford to pigeonhole a particular product, you want to be able to have a product that works together as one solution.

HTW: What role do partners play within this strategy? How do partnerships add value to your solutions?

BOOTH: We are always talking to vendors or potential partners with a view of expanding our range of solutions and we are always looking for alliances and strategic partnerships to enhance our portfolio. One such example, as far as RIS is concerned, is our collaboration with IBM. What we are providing is a live communication system fully embedded in the RIS. As a patient moves through the workflow, the system knows who is working with the patient, who the referring physician is, who the radiographer/examiner is, the nurse that administered the injection, and the radiologist that examined the patient. So as the patient comes into contact with all of these individuals, the system keeps a list of these individuals on the screen, and it is very much an instant messaging system. So if anyone within the facility needs to communicate with someone working with the patient, they are all listed on the right hand side of the screen, they can click on the list to start a live chat, much the same as with other Internet chat programs.

The system also features VOIP and you can share parts of your screens: a radiologist who has a critical result can share a part of his image with a colleague or the referring physician. This means genuine online collaboration.

HTW: Can you see the RIS becoming a tool that merges different technologies, including knowledge databases and diagnostic reference systems?

BOOTH: Technology is fundamentally changing the way we communicate with one another. The world and the global economy are shrinking and the healthcare system is also being affected. Facilities are no longer operating on their own and what they really need is to be able to straddle regions and geographies. And the RIS system should be able to bridge that gap. There is a real shortage of highly skilled radiologists capable of performing specialised exams. Research facilities are now tending to share their information. So RIS solutions should enable them to continue working without geographical constraints. For example, a radiologist in Denmark specialising in a specific area can help his hospital while also referring to other exams in other areas in Denmark or even from another country.

HTW: Reducing turnaround time is one of the big issues at the moment. What is your approach?

BOOTH: Our RIS incorporates digital dictation and voice recognition, where the words appear in front of the radiologist and they edit the text themselves. We also have voice recognition that runs in the background, so the radiologist can simply dictate and let a transcriptionist do the editing. We also use remote transcription services through HL7.

A lot of the sites we are working with are looking for same-day turnaround. External reading sources mean that all exams can be read within a day. The better the service they offer to referring physicians, the more the referring physicians will send their patients to them and the more business they will get. This example is directed more towards a private healthcare system.

In public healthcare, it is important to have these readings carried out externally so that you can start managing the number of exams that have to be read. In practice, you can set triggers in the system so that if you fall behind or you have a certain number of exams to read in a certain period of time, then the exams start getting sent to outside facilities. So you can start managing the backlog using radiologist groups, reading groups or the hospital down the road.

HTW: Can innovative RIS also improve patient care?

BOOTH: Yes. Because the RIS is the central point for information, there is less risk of error, for example through accidentally choosing the wrong patient or saving a report in the wrong file. The radiologist can also make a diagnosis more quickly because he is able to recognise critical conditions earlier and administer the appropriate care.

HTW:What are the key RIS markets?

BOOTH: RIS was first implemented in large universities and large research facilities. As the IT systems became better, more versatile and flexible - and also more affordable - it all filtered down to large-scale community hospitals, and then to medium-sized hospitals serving smaller regions. In the future, it will be vital to be able to collaborate across sites, cities and regions. Another key market is the diagnostic imaging centre market, they have a smaller staff, yet are facing the same problems as the larger organisations, they need a versatile RIS system to help them overcome that challenge. One emerging market encompasses the large-scale organisations with older RIS solutions that are now looking to replace them in a bid to further increase efficiency. For example, in Scotland they have Carestream RIS throughout the country and we will soon see more of these large-scale implementations.

HTW:What does Frost & Sullivan's Market Penetration Award mean to you and your team?

BOOTH: We are very honoured to receive this award. It's the ultimate compliment when a customer can trust us to provide their mission-critical radiology IT system. We make a point of listening carefully to our customers, integrating the features the customers want right now as well as the features that they will want in five years. To be recognised by a company like Frost & Sullivan and to be rewarded for all the hard work makes everything worthwhile.

Mr. Booth, thank you very much for your time and answers.

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