ATG Interviews: Raul Valdes-Perez

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Raul Valdes-Perez
CEO OnlyBoth and Founder of Vivisimo

ATG: Raul, you started your career on the Carnegie Mellon University computer science department faculty but from there went on to co-found Vivisimo, a company specializing in the development of computer search engines and now the new startup company OnlyBoth. Where did that entrepreneurial spark come from?

RVP: The sparks come from having an idea. It’s no fun starting a company without a good idea. Luckily somebody invented computers and programming languages, so it’s possible to achieve a broad impact by programming something novel and useful, without it being a massive undertaking. The ideas come from artificial intelligence, and my own focus is automated inference: figuring out what people do or could infer from data and background knowledge, and trying to automate the inference-making, or at least provide computational aids.

ATG: According to your press release, OnlyBoth has just launched “a novel technology that discovers new insights in data and writes them up in perfect English, all automated.” How did you come up with such an innovative concept?

RVP: In late 1998, I was preparing for a family trip to Miami, Florida. As a research faculty member at Carnegie Mellon’s computer science department, I thought to do something while there, so I visited the University of Miami’s Website to see about giving a talk on our artificial-intelligence research. I had a revelation upon reading this sentence: “The University of Miami is the youngest of 23 private research universities in the country that operate both law and medical schools.” Couldn’t software be programmed to come up with such insights, which I began calling niches, and also write them up?

ATG: According to your Website, “this technology makes plain, in excellent English, what is hidden in masses of data.” Is there a type data that is particularly amenable to this type analysis? What hidden relationships within the data is the technology most adept at discovering?

RVP: It works on structured data: entries (e.g., colleges, genes, members of congress, athletes, etc.) described by numeric, yes/no, symbolic, and even set-valued attributes. Part of the research challenge was identifying types of statements about individuals that people find interesting and understandable, and even partly inventing some new types, such as the rare “Only... both” types of statements, which are quite rare in human practice, but are understandable, precise, and concise. Such statements gave rise to the company name.

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next steps? How do you envision the future of the company?

RVP: We will launch free applications, grow awareness of this technology, learn from these launches and from discussions like this one, identify the best commercial applications, and go for them.

ATG: Given your work with Vivisimo and your experience in Web search and discovery systems, we would be remiss if we didn’t ask you how you see search and discovery evolving. What can we expect in the near term? How about in the long term?

RVP: I’ll let companies in the space talk about what’s next. I can talk about what’s needed. Users approach information retrieval systems with a variety of questions they want answers to. They then need to fit their need to the narrow channel of expressing a search query and getting back a list of results, with some navigation extras, perhaps. To address their need, users then need to do lots of extra manual and intellectual work.

Here’s an example: Users often want to know what are the emerging topics in an area, i.e., what are emerging (or submerging) trends. You can do a query, but then you have to figure out yourself what the implicit trends are. Andre Lessa and I worked on that at Vivisimo, supported by a National Science Foundation grant, “Embedding Trend Discovery Within Search Engines,” and got very promising results. As a user, I’d like search engines to offer to solve a variety of common information retrieval and analysis needs, not just search.

How about in the long term?

ATG: That sounds like a goal that we in libraries are trying to address. Instead of providing search results only, how do we provide possible meaningful solutions/pathways?

RVP: Identify the common and valuable questions that users want answers to, and design algorithms and heuristics that will do it; it’s a research endeavor. A further challenge is that you don’t want yet another entry page that is separate from the search page. For our trend discovery work at Vivisimo, we added a separate Emerge button placed next to the Search button. A user typed a query and then pressed either Search or Emerge. Of course, you can’t have too many such buttons, but you can have a few more. IBM now owns the prototype we developed. We’d love for them to bring it to market.

ATG: Everyone needs a little down time. What leisure activities do you enjoy? If we were to take a quick peek, what books would we see downloaded on to your tablet or smartphone?

RVP: I don’t have a tablet or a smartphone, because I don’t spend insufficient time in front of computer screens. For leisure, I prefer people contact involving friends, family, and travel, or books that help me see the world in ways that I’m not seeing now.

ATG: Raul, Thank you so much for a thoughtful interview! We really appreciate it.

RVP: You’re very welcome. 😊

Interview — Raul Valdes-Perez

people profile

Chief Executive Officer, OnlyBoth LLC
P.O. Box 8120, Pittsburgh, PA 15217
OnlyBoth.com


EARLY LIFE: Attended elementary and high school in the Chicago area, then did a gap year in Madrid before college.

PROFESSIONAL CAREER AND ACTIVITIES: Got B.S.E. and M.S. in computer engineering at University of Illinois at Chicago. Then went abroad for two years seeking adventure. Returning to the U.S., worked at the MIT AI lab for two years in Randy Davis’s group. Went to Carnegie Mellon to do a Ph.D in computer science. While a faculty member, finally, we started Vivisimo, which I served as CEO for nine years and chairman until IBM acquired us, 12 years after founding.

IN MY SPARE TIME: Family, friends, travel.

FAVORITE BOOKS: I often cite Cyrano de Bergerac as a romantic tale of heroism and nobleness, and Brave New World as a dystopia of a diminished mankind.

PHILOSOPHY: “Advice is for Winners” which is the title of my book, subtitled “How to Get Advice for Better Decisions in Life and Work.”

MOST MEMORABLE CAREER ACHIEVEMENT: 15 years of monthly meetings with my Ph.D advisor and Nobel Laureate Herbert A. Simon, first as a student and later as a collaborator and colleague. One could ask him something about anything and walk away smarter.

GOAL I HOPE TO ACHIEVE FIVE YEARS FROM NOW: We want OnlyBoth to liberate the tremendous insights cloaked in structured data everywhere, yearning to breathe free and become known.

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against the grain

publisher profile

OnlyBoth LLC

OnlyBoth LLC
P.O. Box 8120
Pittsburgh, PA 15217
Website: http://onlyboth.com

OFFICERS: Raul Valdes-Perez, Chief Executive Officer; Andre Lessa, Chief Technology Officer.

HISTORY AND BRIEF DESCRIPTION OF YOUR COMPANY/PUBLISHING PROGRAM: OnlyBoth discovers new insights in structured data and writes them up in perfect English. We say that only OnlyBoth does both. We also say that “A sentence is worth 1,000 data (TM).”

The idea for the technology came in 1998 and was supported by an NSF grant to Valdes-Perez while at Carnegie Mellon. Upon co-founding Vivisimo with a different technology, the idea sat on a shelf for 12 years. After IBM acquired Vivisimo, OnlyBoth co-founders Andre Lessa and Valdes-Perez saw that the idea remained novel and was even more relevant today, and so started OnlyBoth in March, 2014.

We seek to liberate the many insights cloaked in data by launching various applications for personal and business insights as well as fun. 😄