

# CLOUD - Consortium for Local Ownership and Use of Data

Reweaving the Fabric of the Internet to Transform Privacy, Security, Identity and Data



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*"We see CLOUD as providing a unique opportunity to transform data within the IBC community for not only their benefit, but for the soon to follow benefit of all patients receiving treatment for some form of cancer."*

— **BRYON DAVIS,**  
**President, The Milburn Foundation**

*(private charitable organization dedicated to inflammatory breast cancer research)*





# CLOUD's Vision

CLOUD - Consortium for Local Ownership and Use of Data - a non-profit, considering both 501(c)(3) and 501(c)(6) status with the IRS for its philanthropic and standards-setting work, was formed as a result of its Founder, Gary Thompson's personal journey, at the side of his wife, who battled breast cancer on-and-off for over 11 years before her passing. Its goal is simple. Create an open-source architecture for the Internet that rethinks privacy, security, identity and data so to unleash a transformation with information and connections across the Internet. CLOUD's ultimate deliverable is a set of open-source standards and an architecture that achieves this goal. One of those standards is CTML - context markup language. More on the architecture is described in the section by that name. Many of CLOUD's supporter believe that CTML, the new digital language proposed by CLOUD, Inc. holds the potential to overcome challenges in data accessibility and make the vision for big data and its impact on cancer cures and access a reality.



*"The room was still on Friday as Gary Thompson, co-founder and CEO of CLOUD, Inc. began to tell attendees at Komen's Big Data for Breast Cancer – West Coast meeting what provokes and pushes him in his efforts to use Big Data to improve cancer care. It started in 2009, when he and his wife Maureen headed to MD Anderson Cancer Center to battle her recurrence of breast cancer.*

*As the next several months unfolded, Gary witnessed firsthand today's most vexing issues of privacy, security and data. While her providers applied all of their skill and available information, in 2014, everything changed. Gary awoke in the early hours of a new day to find that the love of his life was no longer breathing. Their experience inspires Gary's work today with CLOUD, Inc."*

**- STEPHANIE BIRKEY REFFEY, PHD, SR. DIRECTOR, EVALUATION AND OUTCOMES, KOMEN, 02-25-2017 , BIG POSSIBILITIES WITH BIG DATA IN BREAST CANCER**





# Changing Information Models to Change the Fight With Cancer

## Background

The Internet recently celebrated its 40th anniversary; HTML has only occupied a little over 15 years of that history. In those 15 years, HTML has moved the Internet away from its roots and made the experience more about web pages than people. CLOUD believes this must change, and that individuals must be put back at the center of the Internet. Rather than Web 2.0 or 3.0, this means that a world of ME 1.0 is at hand, and a contextual markup language (CTML), an API for people and data, must supplement the hypertext markup language (HTML) of web pages.

In many ways, the current state of electronic health records is trapped by this same state of affairs, an environment defined by current IT infrastructure, the structure of database applications and healthcare records software which used paper records and filing cabinet metaphors to dictate the designs of these systems. In most cases, these systems were designed to capture and store data within very specific work flows rather than collect, utilize and share data for specific individuals from multiple sources over periods of time.

The answer to this challenge is to go deeper. Just like we are unpacking the human genome to advance targeted immunotherapy in our fight with cancer, we need a new genome for the Internet that lets us target relationships and connections between humans and their information. As Gary frequently notes, "if you think about current information and technology architectures like chemotherapy, they work, but they have side effects." Those side effects are data breaches, identity theft, duplication of data, and worse, the constant faxing of information between players in the oncology ecosystem in a world of advanced EHRs that were supposed to fix all of that. Lives are at stake. We have to move as fast as cancer. We have to rethink the fight. Change the terms of battle.

*Just like we are unpacking the human genome to advance targeted immunotherapy in our fight with cancer, we need a new genome for the Internet that lets us target relationships and connections between humans and their information.*



# Digital Fabrics and Digital Weavers™

What is a *digital fabric*? To answer that is as simple as thinking about real fabric and the weaving ecosystem that makes such fabric possible. To make fabric, we use threads. Gary noted in his TEDxAustin talk, that in the digital world, those threads (data) are not limited to one fabric. Digital threads can be used dynamically and simultaneously. Woven together, these digital threads can create digital fabrics. Just like a real weaver uses a loom, the CTML-enabled world of information will enable digital looms to pull together these digital threads dynamically and contextually, as needed, across the Internet and in the case of cancer, by patient, oncologist, researcher, and all others in the oncology ecosystem, or any other disease state.

Each of these players in the new weaving ecosystem of the Internet will become a Digital Weaver™, harnessing the power of digital threads and digital fabrics to transform the fight with cancer. A Digital Weaver is to CLOUD's new language what a web browser like Chrome, Firefox or Safari is to HTML. Imagine weaving together the thread of a patient's newly diagnosed breast cancer with the thread of a researcher working on a new therapy. The resulting digital fabric is no longer a clinical trial. It is the fabric for a life-saving connection, a thread for life.



*"The Internet is not working to its full potential, not yet... The Internet and the World Wide Web are not the same thing. The Web is a presentation layer, but it's not the only way. HTML is a perfectly good way to mark up information on web pages, but it's not such a good way to mark up information about us. We need a language for people. We need a contextual markup language."*

— GARY L. THOMPSON

**"The Journey to ME 1.0: Why the Future of The Web Could Be All About Us"**  
by Courtney Boyd Myers, *The Next Web*





# Defeating the "Emperor of All Maladies" - Gary's Personal Journey

Defeating the "Emperor of All Maladies" informs both Gary's philanthropic activities and his professional work on the open source future of CLOUD. Gary's philanthropic work with the Leukemia and Lymphoma Society started because of a little boy, Kethan, a classmate of his daughter, Kyla. He met Kethan back when Kethan and Kyla started 1st grade. He was undergoing treatment for ALL - acute lymphocytic leukemia. Kethan should be in 10th grade with Kyla, but he passed of the side effects of his 7 year battle of leukemia in the summer of 2013. "Although I have been honored by LLS with both the Chairman's Citation in 2016 and the President's Award in 2017, it is Kethan that motivates me to make a difference in the fight with cancer," said Gary recently.



After his own wife, Maureen's, passing on October 21, 2014, following a courageous on and off 11 year battle with breast cancer, Gary's work to rethink the connections between people and their connections with each other and their information took on a new dimension. In his words, "I had been provoked. Rather than being angry at cancer, I chose instead to be provoked, provoked by my love for Maureen."

Gary first spoke of his vision for a new Internet and its impact on the fight with cancer at TEDxAustin in 2011 in his talk on "Reweaving the Fabric of the Internet to Transform Humanity." Maureen was in the audience that day. He spoke to her directly. Although his wife's metastasizing breast cancer "took him away" from the work of CLOUD in 2014, as they explored every possible path to turn it back, it also exposed him to the many aspects of the "oncology ecosystem" that must be transformed to advance both cures and access.



# THE EMPEROR OF ALL MALADIES



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A BIOGRAPHY OF CANCER

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SIDDHARTHA  
MUKHERJEE

"A compulsively readable, surprisingly uplifting, and vivid tale. Thrilling."  
—O, THE OPRAH MAGAZINE



*"There comes a point in life when you finally have enough pieces of the puzzle to see the bigger picture. For Gary Thompson, this happened in 2009 when his wife, Maureen, had a recurrence of breast cancer. He had to drive her down to MD Anderson Cancer Center in Houston from Austin, Texas with a CD of her diagnosis on their dashboard. It was during the three-hour drive when it occurred to him that had the connections been better, the speed at which Maureen could have been put in contact with the right life-saving therapies would have been quicker."*



**— GARY L. THOMPSON,  
PENANG MONTHLY,  
"THE INTERNET'S CLOUD-Y FUTURE" BY CH'NG CHIN CHIN, JANUARY 2014**



# CLOUD's Team



**GARY THOMPSON**  
CEO AND FOUNDER

At the core of CLOUD is Gary Thompson, CEO and Founder. His career spans the earliest days of Apple in 1987, when he graduated Northwestern University, to leading the Texas Education Region from 2003-2006. In between, Gary received his MBA from the Kellogg School of Management, as well as his JD from the University of Texas School of Law. He was also appointed by 2 Governors of the State of Texas to the nascent eGovernment Task Force in the dot com days of 2000. Gary has always been at the forefront of systemic change.



**DAWN JOHNSON**  
ADVISOR

Dawn Johnson serves in an advisory capacity for CLOUD with primary emphasis on market positioning and brand strategy. Today, Dawn is an entrepreneur and business consultant. Her passion is helping companies find their "moment of truth" and owning every aspect of the customer experience. Previously, Dawn was Executive Vice President and CMO for USAA where she worked in the insurance and financial services industry for more than 20 years.



**MAL POSTINGS**  
BOARD MEMBER

Mal Postings is the global CTO for IQVIA (formerly QuintilesIMS, a merger between Quintiles and IMSHealth, leading Fortune 500 global clinical research and IT organizations). Mal's role as CTO at IQVIA involves looking at emerging and new breakthrough technologies that can benefit both the clinical trial industry and wider areas of scope in the healthcare market. His expertise as a global lead architect spans Capgemini and Ernst & Young. Mal's "thought leadership" also includes his founding of Vincigravitas and the concepts of Quanta Value Networks and Value Pathways™.



**A.J. LOIACONO**  
BOARD MEMBER

AJ is a successful entrepreneur, with over 20 years of experience in pharmacy benefits, finance, and technology. As a co-founder of Truveris, he served for seven years as CEO, Chief Innovation Officer, and Board Member and led the company to record growth (Deloitte FAST 500 and Crain's Fast50). Prior to Truveris, AJ co-founded SMS Partners, a joint venture with Realogy (RLGY), and exited the partnership with a buyout. In his first venture, AJ started a supply chain consulting company, Victrix, and after six years he successfully sold the company to Chrysalis Solutions.





# CLOUD's Team



**DAVID BARRON**  
COO

David Barron, formerly of Apple, Microsoft, Americast and CableLabs, serves not only as an advisor to the CEO of CLOUD, Gary Thompson, but brings a breadth and depth of experience in strategic alliances, joint ventures, as well as intellectual property and standards adoption. These experiences will serve him well as CLOUD's future COO.



**RON GREEN**  
ADVISOR

Ron Green is advising CTO for CLOUD. Ron is formerly of Powered and currently the CTO of Thrive Technologies, a Mint-like interface to healthcare information, which he founded. With a background in evolutionary and adaptive systems, Ron's computer science expertise has allowed him to move forward many software startups from idea to successful market penetration.



**JOSH KIMMEL**  
ADVISOR

Josh Kimmell serves as CLOUD's Chief Experience Architect in an advisory role. Josh is currently the Design Lead for the IBM Security Group and served in a similar role for IBM Watson. Previously, Josh was Creative Manager and Director for NetSpend Corporation, as well as a Senior Designer at both the Dallas Market Center and BroadbandNow!



**PAUL WILKINSON**  
ADVISOR

Paul Wilkinson, former Sr. Advisor to the Chairman of the Securities and Exchange Commission. Paul was intimately involved in the rollout and adoption of XBRL (eXtensible Business Reporting Language) at the SEC and has been our acting Chief Strategy Officer since CLOUD's founding. Paul's standards expertise, along with his legislative expertise as Executive Director of the House Policy Committee and the Director of Communications for the Committee on Homeland Security will be invaluable to CLOUD's future rollout and adoption.





# CLOUD's Future Architecture

At its most basic level, CLOUD re-conceives the information paradigm by starting with data, rather than data systems, and recognizing that people are the logical connection amongst all of this information. Just like we don't ask which power plant delivered the electrons when we flip a light switch, we shouldn't have to ask which database delivered the data when we are looking for answers, especially in a critical fight, like that with cancer.

CLOUD also recognizes that simply making digital a paper-based way of thinking continues to trap us in a paper-based paradigm. It is something CLOUD calls "chartopomorphism." Anthropomorphism applies human attributes to inanimate objects. "Chartopomorphism" applies paper-based thinking to digital objects. Privacy, security, identity and data are not four separate problems but instead separate axes of the same problem, created by this paper-based way of thinking in a digital world.

Simply trying to create new pathways between our digital filing cabinets (databases) will not only perpetuate the privacy and security problem but is simply not scalable structurally. There will always be another filing cabinet, another data set, another interoperability challenge. CTML - context markup language - will provide access to a whole new suite of Digital Rights Servers (DRS) with WHO, WHAT, WHEN, and WHERE I Am™ "tags." These new information "dimensions" allow specific pieces of information to be tagged to an individual or a combination of individuals. These individuals will have full control of how much and what information gets accessed or shared. CLOUD's architecture of CTML and DRS will not replace other standards but instead adds the missing dimensions to resolve privacy, security, identity and data at the deepest architectural levels of the Internet.

Gary Thompson, founder and CEO of CLOUD went into much greater detail on this new way of thinking in his talk at TEDxAustin. In addition, "[The Internet's CLOUD-y Future](#)," published by Penang Monthly in January 2014, provides an excellent overview of the CLOUD thinking, as well as its motivation. Gary was interviewed by Ch'ng Chin Chin for Penang Monthly, following his [TEDx talk in Penang, Malaysia](#) in honor of Kethan's passing a few months earlier.

*In a CLOUD-enabled world, data does not need to be moved. It can stay where it is and interact with other data of its kind and also with its owner's identity located elsewhere. And because you can untether your data from your identity, your data is anonymous and private.*





# About

CLOUD is the Consortium for Local Ownership and Use of Data. We are a non-profit technology standard consortia [pursuing 501(c)(6) status, as well as considering 501(c)(3) status with the IRS for our philanthropic work]. In addition to our technology goals, it also became clear that there was no cohesion to the many individual efforts underway within industry silos and technology silos alike. Just like the Internet is a global network, the answers to privacy, security, identity and data will be global, too, and they will also be linked. You can't address one without addressing the others simultaneously. Through many individual meetings, social media, as well as industry conferences from Munich to Brussels to Toronto and engagement with industry organizations from healthcare to finance to education, we realized that in addition to CLOUD's vision for the future of the Internet, we can also serve a unique function bringing together many disparate voices and experts across countries, industries and technology sectors.



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