We are now a community

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Right now there are thousands of emails registered on Talk-Polywell. Wow. Congratulations polywellers – we are now a community. If we could somehow connect, unify and, organize all these people; we would be a force to be reckoned with. We have come a long way since the Bussards' video hit YouTube in November of 2006. At that time, if you were a polyweller, there was not very much to connect with.

I think many of us got started in much the same way. Someone sent us the link to Bussards' presentation. We watched the video on YouTube. We did not understand it, but we felt we had seen something significant. We were left wondering: what can I do now? Before November 2006, there was not much. At that time there were no polywell blogs, no polywell videos, no polywell group and, polywell did not even exist in wikipedia. This internet community started from basically zero and has grown, person by person, to thousands of people. Great work guys.

How we got here:

People need to understand that: this did not just happen. This community grew because individuals stood up and made things happen. A few short weeks after Bussards' speech, Fusor.net and askmar.com both started posting polywell information and M Simon blogged his first post on the polywell. The idea was entered into wikipedia at the end of November 2006. Then, Thomas Ligon republished a polywell article in January of 2007. That spring, the idea was covered by a few news sources. It was mentioned in the New York Times and the Defense News. In March of 2007, a group was started on Yahoo.com. Then, in June, Talk-polywell - the first polywell forum - was set up. In the first two months there were only 59 ardent supporters registered. Some of them went on to contribute greatly to the online Polywell community – including Talldave, FoxRoger, MSimon and KitemanSA. That summer, an Estonian named Indrek, uploaded the first videos simulating the polywell on YouTube.

While the internet community slowly grew, the experimental world continued moving. Bussard used 2007 to appeal for funding, setting up EMC2 as a charitable research organization. In August of 2007 when Talk-Polywell was only a few months old, the research team got restarted with funding. Unfortunately, that October, Dr. Bussard passed away from cancer. It should be marked as a very sad day for all of us working towards alternative energy. The research team had WB-7 up and running in January 2008 – about the same time that Alan Boyle of msnbc.com wrote his first polywell post. The team, lead by Dr. Richard Nebel, ran tests till late summer 2008. Their results were never published. The team submitted their findings to a review board that fall.

The internet world continued moving forward. In the fall of 2008 - during the closing months of the presidential campaign – rogersjg submitted a polywell-like idea to Google's 10 to the 100 competition. Google was giving out 10 million dollars for ideas to help the world. At the same time a polywell presentation was uploaded by CleanEnergyFuture45 on YouTube. In the first weeks of 2009, the cover of Time magazine featured a picture of a compact florescent light bulb

with title: “Why we need to see the light about energy efficiency.” Energy was clearly a hot issue. That January, a team of amateur filmmakers interviewed Thomas Ligon, at his home in Virginia. The hour long film that was created, “An Interview with Thomas Ligon on the polywell” was uploaded on YouTube that May.

Also in the fall of 2008, a thirty year old computer programmer in Brooklyn, NY named Mark Suppes saw Dr. Bussards’ talk and decided he was going to try and build a polywell. That launched prometheusfusionperfection.com a 35 thousand dollar continuing effort to build a working polywell. To date, his blog has received 159,222 hits, over 3,000 dollars in donations and, the volunteer support of many people. He worked through 2009 building a fusor, which produced fusion in mid November of that year. Marks’ effort made world headlines this past June – including a live interview on CNN. Efforts continue to get a working polywell in Brooklyn.

The wheels of governments turned through most of 2009 trying to secure project funding for Nebels’ team. This was the appropriate balance between analyzing and checking the results as well as moving the research forward. The DOD announced the contract on September 11th 2009. The Navy funded the research for $7.86 million dollars, with a completion date of April 2011 – with an opportunity to secure $4.46 million dollars till October 2012, if things go well. I am sure everyone can agree - we hope things do go well.

What do we do now?

Regardless of how large our community is, it is still, for the most part under the radar of the mainstream. This is good. We need to prove this idea. We need to prove it in the most sound and legitimate way possible. We need data that says it works. We need theory that says it works. Dr. Nebels’ team can provide the data. I hope the internet community can provide the theory. So that is where my efforts will be aimed at. The established thinking is this is a dead end. We have a 300+ page thesis from MIT that says – regardless of what Mark does in his warehouse, or what Dr. Nebel finds in California – this reactor will never work. I will not accept that judgment until I fully understand why. And I don’t think you should either. This is too important.

“Fusion energy has been 20 years away, for 30 years.”

I want to say that, regardless of the fusion snags in the past - we have never been here before. In fact, it is because of the past efforts that we are where we are. We have volumes of fundamental fusion data from the 60’s and 70’s, such as reaction byproducts and cross sections. We have a body of work from the 80’s on bulk plasma behavior for a variety of configurations and confinements. We have robust computer models from the 90’s and the 2000’s - code developed for fusion blow back, plasma pressures and temperatures. We have a massive body of work to draw from. Today, we know more about bulk interactions, confinement, injection, power conversion analysis, X-ray production and basic plasma properties, than we ever have before. We should thank the tokamak guys, the laser fusion guys, the national lab scientists, the commercial efforts, the physicists, engineers and mathematicians for making this possible. You should thank them all. They have gotten us here.

Also, we have something else they did not have. We have the internet - a repository where all

this information is accessible to whomever wants it. A tool that allows all of us to communicate, collaborate and put our heads together. Our effort will be mired in the inherent problems of a volunteer, disperse, internet exercise. Peoples' interest will flare up and then die off a few months later. We will have inherent problems with trust and credibility with each other. There will be mistakes and tangents. Regardless, I think we have the man-power, the tools and the resources to do this. We need to use the web to scrub the best ideas about this machine forward, to educate more people about this machines' potential and, most importantly, to prove the damn thing will actually work.

Right now, in our world, there is great confusion. The economy is in a downturn. We are facing global warming. We are facing shrinking energy supplies. We are running out of time. Military, business and political leaders argue and fight about which direction to go in. They don't know what to do. I know what to do. We have got to build this machine. We have got to commercialize it. We need to get a working polywell in the hands of everyone who needs energy. We have to do it soon.

Timeline and Links of Polywell Work:

Bussard's Video – posted on YouTube Nov 9, 2006 - http://video.google.com/videoplay?docid=1996321846673788606#

Askmar – "Transcript of Should Google Go Nuclear?" - November 9, 2006 - http://www.askmar.com/ConferenceNotes/Should%20Google%20Go%20Nuclear.pdf

Fusor.net – first article November 10, 2006 – www.fusor.net

M Simon's first Polywell Post - Monday, November 27, 2006 http://powerandcontrol.blogspot.com/2006/11/easy-low-cost-no-radiation-fusion.html

Wikipedia article – Polywell entered on November 27 2006 - http://en.wikipedia.org/wiki/Polywell

Tom Ligon – "The World's Simplest Fusion Reactor, And How to Make It Work" – January 5, 2007 - http://www.fusor.net/newbie/files/Ligon-QED-IE.pdf

New York Times - "Practical Fusion, or Just a Bubble?"- February 27, 2007 – http://www.nytimes.com/2007/02/27/science/27fusion.html

Defense News – "Fighting for Fusion - Why the U.S. Isn't Funding a Promising Energy Technology" - March 5, 2007 – http://www.emc2fusion.org/2007-3-5%20DefenseNews.pdf

Yahoo Group founded March 2007 http://tech.groups.yahoo.com/group/IEC_Fusion/

Indrek's video – June 2, 2007 - http://www.youtube.com/watch?v=ao0Erhsnor4&feature=related

Talk-Polywell founded June 2007

http://www.talk-polywell.org/bb/index.php

EMC2 Chartable organization - http://www.emc2fusion.org/

Alan Boyle's First Post - January 9, 2008 -
http://cosmiclog.msnbc.msn.com/_news/2008/01/09/4351271-strange-science-takes-time .

Alan Boyle's second post - June 12 2008 -
http://cosmiclog.msnbc.msn.com/_news/2008/06/12/4350196-fusion-quest-goes-forward

Alan Boyle's third post - August 28, 2008 -
http://cosmiclog.msnbc.msn.com/_news/2008/08/28/4350263-fusion-effort-in-flux

Rogersjg's Google submission - October 19, 2008 -
http://www.youtube.com/watch?v=8IJWsXVsAhM&feature=related –

Google's 10 to the 100th competition - October 20th 2008 -
http://www.project10tothe100.com/how_it_works.html

Time Magazine – January 12, 2009 -
http://www.time.com/time/covers/0,16641,20090112,00.html

Interview with Thomas Ligon - May 16, 2009 -
http://www.youtube.com/watch?v=1HatEDkNnn8&feature=related

Mark Suppes Work –
http://prometheusfusionperfection.com/