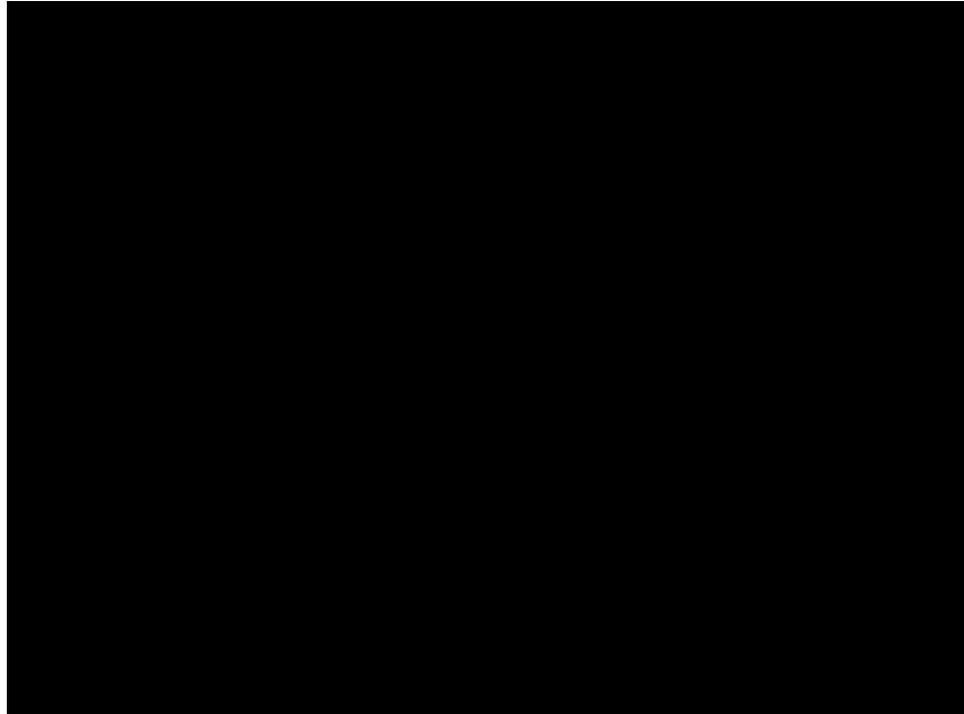


Are You Ready?



<http://www.youtube.com/watch?v=tdMCAV6Yd0Y>

DOE's Online Tech Transfer Ecosystem

Aka... Stop building Moai!

by
Robert Bectel
US Department of Energy
Office of Energy Efficiency and Renewable Energy

What we build today

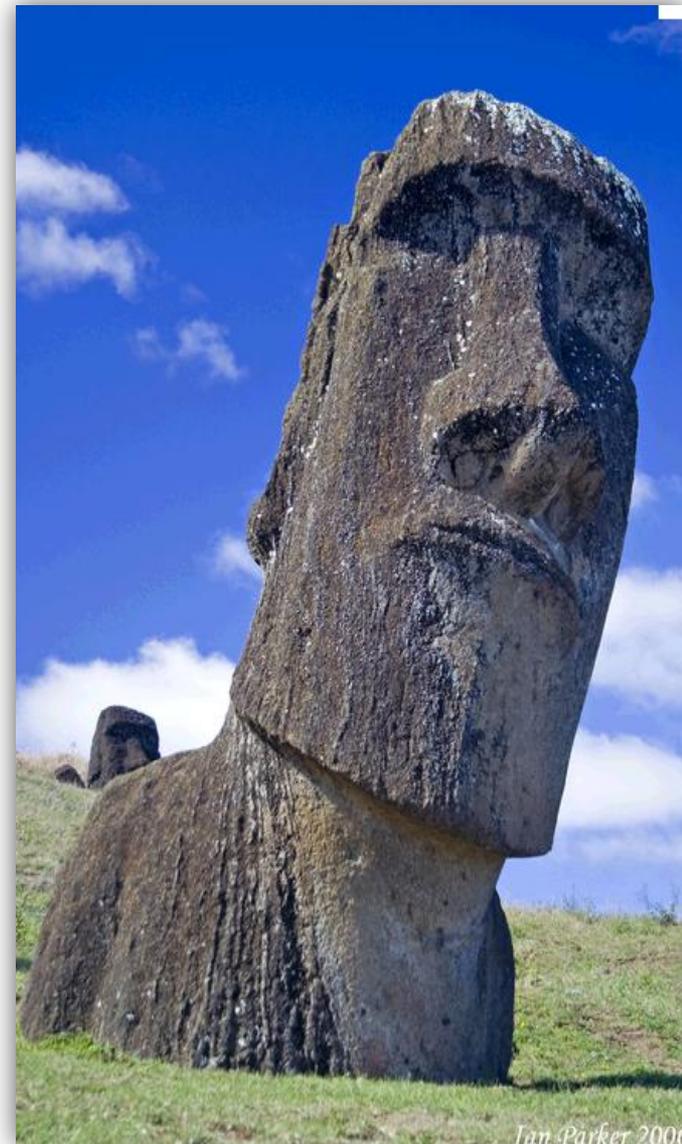
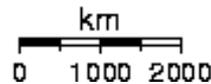
1. What the continued development of single destination sites means for those customers attempting to assess the availability of intellectual property and transferable technologies from the Department of Energy and its associated Labs.
2. Why we need to build open, transparent, accessible and highly distributable solutions;
3. Why you need to deliver content to customers, where they are and when they are!

What is a Moai and Where Exactly is Easter Island?



From Washington Dulles
airport
Trip takes 18 hrs 24 min,
produces 3.011 tons CO₂e
Airtfares from \$3,039

Its closest inhabited neighbor is Pitcairn Island, 2075km to the west,
with fewer than 100 inhabitants.



Jan Parker 2006

DOE IP “Moai”

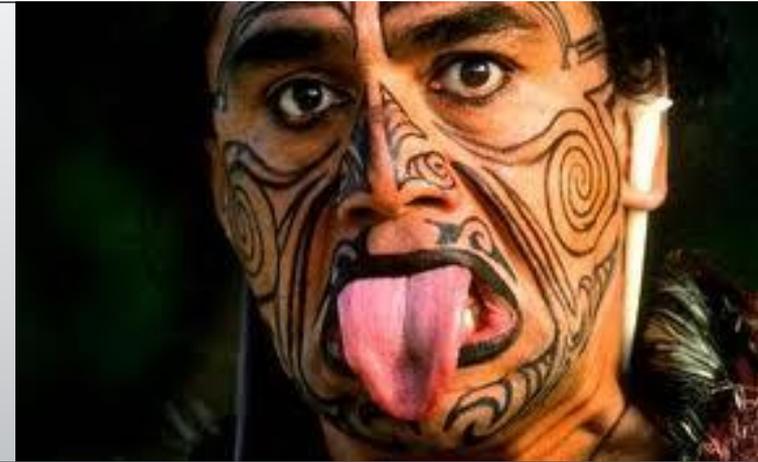


What's your budget?

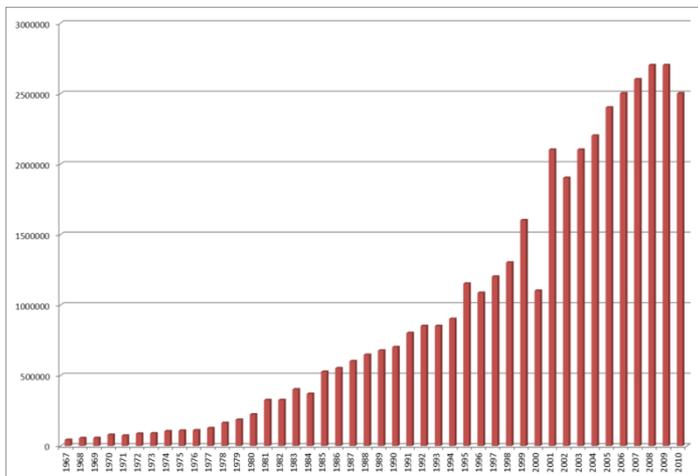
The Obligatory Equation

COST PER VISIT

$$\frac{\sum \text{Acquisition Marketing Costs}}{\text{Number of Visits}} = \text{Average Cost per Visit}$$



Rising Costs of Super Bowl Ad's
1967 - 2010



Does anyone have
\$2.5 - \$3 million for
a Super Bowl ad?



Banner Ad's are Cheap and Effective...Right?



You are 475.28 times more likely to survive
a plane crash than you are to click on a
banner ad

SOLVE media

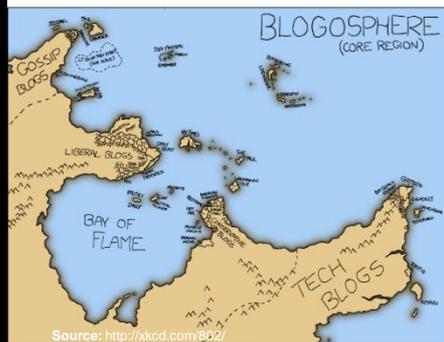
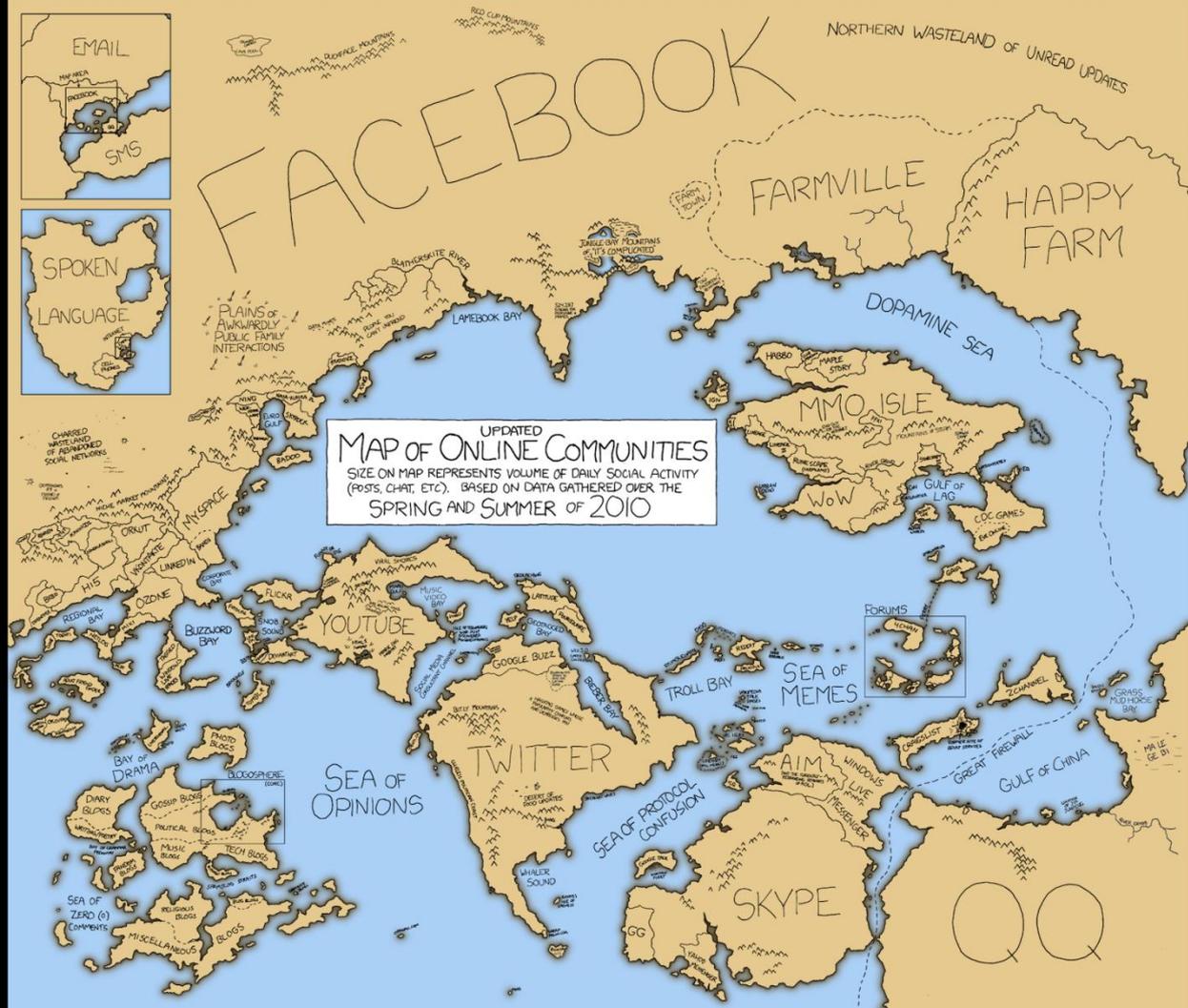
Why We Must Build Mobile Content

1. What the continued development of single destination sites means for those customers attempting to assess the availability of intellectual property and transferable technologies from the Department of Energy and its associated Labs.
2. **Why we need to build open, transparent, accessible and highly distributable solutions;**
3. Why you need to deliver content to customers, where they are and when they are!

Facebook Statistics

With over **500 million users**, Facebook is now used by **1 in every 13 people on earth**, with over 250 million of them (over 50%) who log in every day. The average user still has about 130 friends, but that should expand in 2011. Over **700 Billion minutes a month are spent on Facebook**, 20 million applications are installed per day and over 250 million people interact with Facebook from outside the official website on a monthly basis, across 2 million websites. **Over 200 million people access Facebook via their mobile phone.** 48% of young people said they now get their news through Facebook. Meanwhile, in just 20 minutes on Facebook over 1 million links are shared, 2 million friend requests are accepted and almost 3 million messages are sent.

Source: <http://www.digitalbuzzblog.com/facebook-statistics-stats-facts-2011/>



Source: <http://xkcd.com/802/>

ABOUT THIS MAP

COMMUNITIES RISE AND FALL, AND TOTAL MEMBERSHIP NUMBERS ARE NO LONGER A GOOD MEASURE OF A COMMUNITY'S CURRENT SIZE AND HEALTH. THIS UPDATED MAP USES SIZE TO REPRESENT TOTAL SOCIAL ACTIVITY IN A COMMUNITY—THAT IS, HOW MUCH TALKING, PLAYING, SHARING, OR OTHER SOCIALIZING HAPPENS THERE. THIS MEANT SOME COMPARING OF APPLES AND ORANGES, BUT I DID MY BEST AND TRIED TO BE CONSISTENT.

ESTIMATES ARE BASED ON THE BEST NUMBERS I COULD FIND, BUT INVOLVED A GREAT DEAL OF GUESSTIMATE, STATISTICAL INFERENCE, RANDOM SAMPLING, NONRANDOM SAMPLING, A 20,000-CELL SPREADSHEET, EMAILING, CADDLING, TEA-LEAF READING, GOAT SACRIFICES, AND GUT INSTINCT (I.E. MAKING THINGS UP).

SOURCES OF DATA INCLUDE GOOGLE AND BING, WIKIPEDIA, ALEXA, BG-SERVICES.COM, STUMBUPON, WORDPRESS, AKSMET, EVERY WEBSITE, STATISTICS PAGE I COULD FIND, PRESS RELEASES, NEWS ARTICLES, AND INDIVIDUAL SITE EMPLOYEES. THANKS IN PARTICULAR TO FOLKS AT LAST.FM, LIVEJOURNAL, REDDIT, AND THE NEW YORK TIMES, AS WELL AS SYSADMINS AT A NUMBER OF SITES WHO SHARED STATISTICS ON CONDITION OF ANONYMITY.



Mobile by the numbers.....

- **There are 5.9 billion mobile subscribers (that's 87 percent of the world's population).** *
- Half a billion people accessed mobile Internet worldwide in 2009. *
- Over 300,000 mobile apps have been developed in three years. Apps have been downloaded 10.9 billion times.* 1 in 4 mobile Apps once downloaded are never used again.
- Usage is expected to double within five years as mobile overtakes the PC as the most popular way to get on the Web*
- Smart phone units sold will surpass PC units in 2012 – *Morgan Stanley – June 2010**
- Smartphone units sold actually surpassed PC units...in Q4 2010 – *IDC Worldwide Quarterly Tracker – Jan 2011 -- 100 million units sold in Q4 2010 vs. 92 million PC's.* *

76.8 MILLION PEOPLE
USE SMARTPHONES
IN THE **U.S.A.**



Source: * <http://mobithinking.com/mobile-marketing-tools>

**<http://www.bbc.co.uk/news/technology-16391730>

Image source: <http://www.bondgrp.com/blog/mobile-phones-amazing-growth/>

Where IP and Technology Transfer Content Needs to Live

1. What the continued development of single destination sites means for those customers attempting to assess the availability of intellectual property and transferable technologies from the Department of Energy and its associated Labs.
2. Why we need to build open, transparent, accessible and highly distributable solutions;
3. Why you need leverage a solution designed to deliver content to customers, where they are and when they are!

Energy Innovation Portal

Designed to support...

- Investors
- Business People
- Entrepreneurs
- Innovators
- Knowledge Seekers
- Dreamers
- Builders
- Scientists
- Journalists
- Analysts

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Linking Energy Technologies with Market Opportunities

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Find information on energy efficiency and renewable energy technologies available for licensing developed by U.S. Department of Energy laboratories and participating research institutions.

[Learn more about working with DOE laboratories.](#)

Register for Our Webinar >>>>

Our webinar on March 27 will highlight 4 National Laboratory technologies from the Energy Innovation Portal. A representative for each technology will give a 10 minute presentation leaving a few minutes for Q&A.

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PARTNERS

Advanced Materials	Hydrogen and Fuel Cell
Biomass and Biofuels	Hydropower, Wave and Tidal
Building Energy Efficiency	Industrial Technologies
Electricity Transmission and Distribution	Solar Photovoltaic
Emerging Technologies	Solar Thermal
Energy Analysis Models, Tools and Software	Startup America
Energy Storage	Vehicles and Fuels
Geothermal	Wind Energy

SEARCH

Search for energy efficiency and renewable energy technologies available for licensing, emerging technologies, patents*, and patent applications*.

SEARCH

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* - Patents and patent applications shown may or may not be available for licensing. Please contact the partner for more information.

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3. [Blue Mussel Adhesive](#)
4. [APIs for Online Energy Saving Tools: Home Energy Saver and EnergyIQ](#)
5. [Pretreatment Methods for Biomass Conversion](#)

- Identify leading-edge energy technologies.
- Build your business portfolio through technology licensing.
- Fulfill your energy market business plan.

Find Energy Technology Licensing Opportunities on the

Energy Innovation Portal

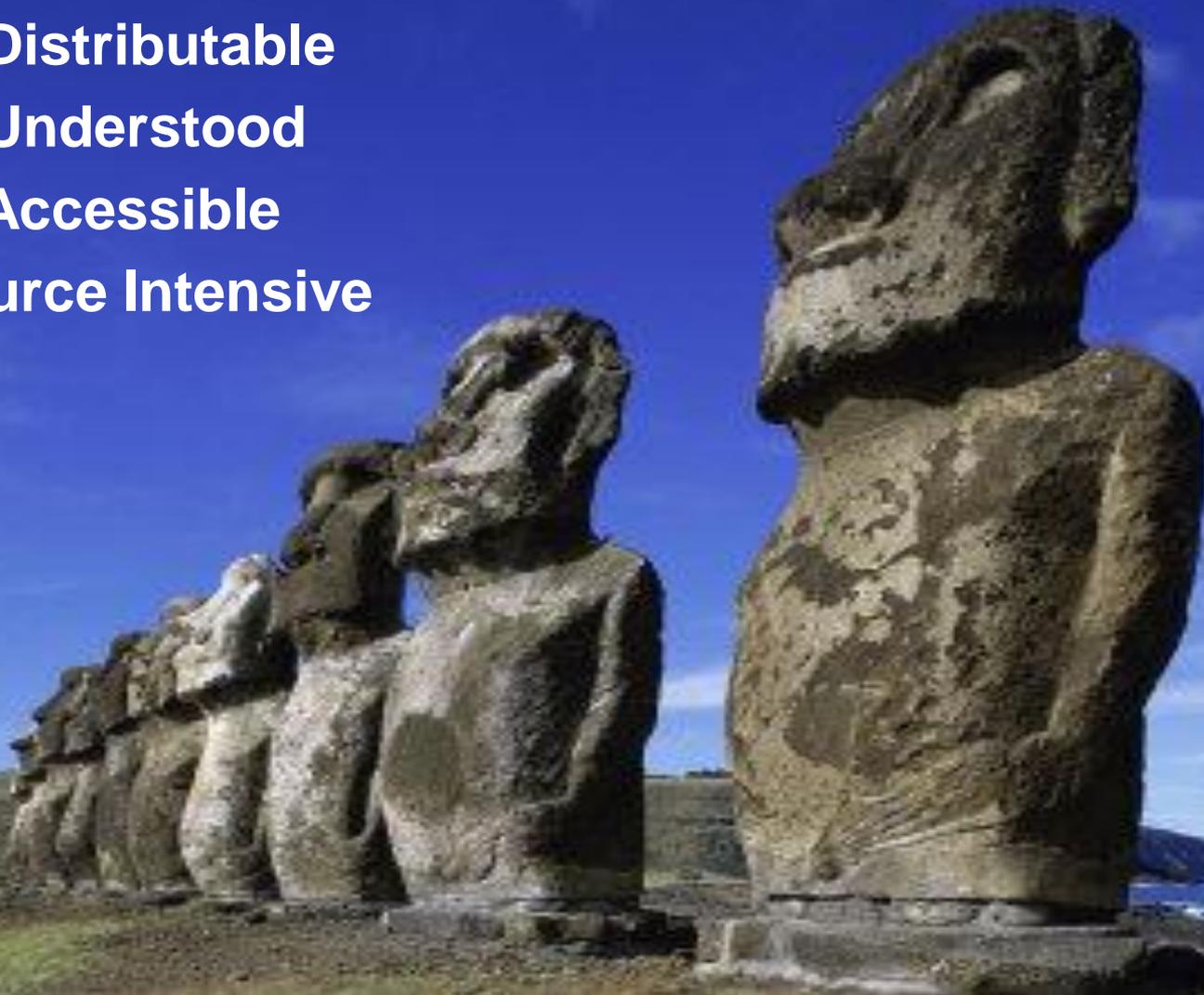
U.S. DEPARTMENT OF
ENERGY | Energy Efficiency & Renewable Energy

The Final Points!



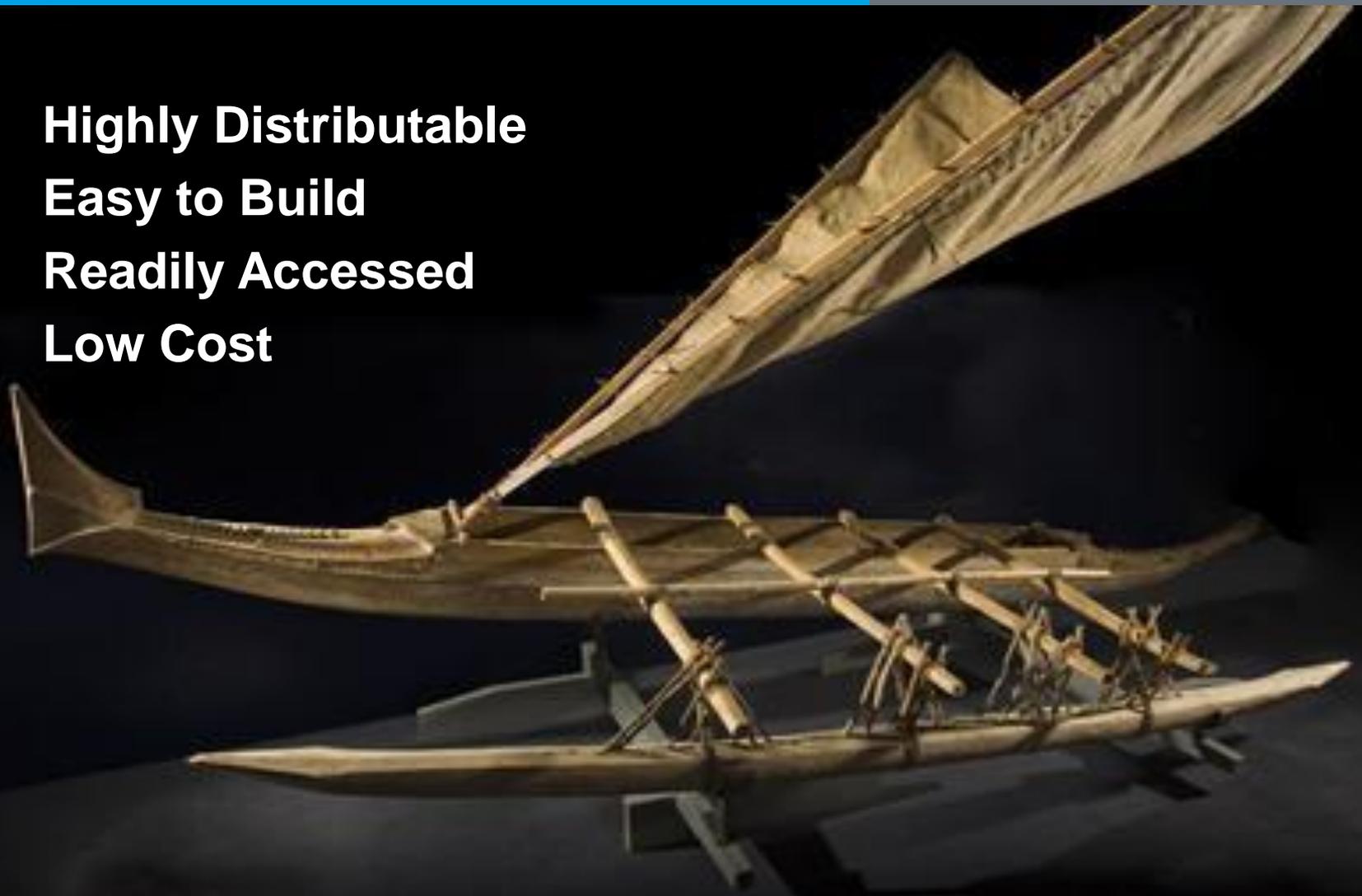
Build Less Moai

NOT Distributable
NOT Understood
NOT Accessible
Resource Intensive



And More Outriggers

Highly Distributable
Easy to Build
Readily Accessed
Low Cost



How To Contact Me

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- **LinkedIn:** <http://www.linkedin.com/in/rbectel>
- **Twitter:** <http://twitter.com/rbectel>
- **Phone:** 202-586-9290

- Additional Supporting Slides

How Do You Measure Your Costs Per Customer Acquisition?

- CPM (Cost per Mille) or CPT (Cost per Thousand Impressions)
- CPV (Cost per Visitor or Cost per View)
- CPC (Cost per Click)
- CPA (Cost per Action or Cost per Acquisition)
- CPL (Cost Per Lead)
- CPS (Cost per Sale)
- ECPM (Effective CPM)
- Fixed Cost

Department of Energy Patent Focus aka POCUS



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Technology Marketing Summaries (12) | **Patents & Applications (307)** | **Emerging Technologies (1)** | **Publications (3)**

Category	Title and Abstract	Partners	Date
 Solar Photovoltaic	<p>Ultra-Fast Quantum Efficiency Solar Cell Test</p> <p>According to the U.S. Energy Information Administration's 2010 International Energy Outlook, solar energy is expected to grow globally by 12.7% per year until 2035; more than any other renewable energy source. To meet this demand, the renewable energy industry must develop and manufacture photovoltaic (PV) cells that are less expensive, more reliable, and more efficient in converting solar energy into electricity.</p> <p>Quantum efficiency (QE) is the standard test which indicates how well ... enables PV designers and manufacturers to quickly and economically ... to increase yield of high efficiency PV cells.</p> <p>In addition...</p>	National Renewable Energy Laboratory	07/08/2011
 Solar Photovoltaic	<p>Hot Electron Photovoltaics Using Low Cost Materials and Simple Cell Design</p> <p>"Third-generation" PV technologies are being actively pursued in academic research labs. These include nano-optics, multi-junction architectures, multi-exciton, plasmonics, and lower cost tandem cells. The goal is a module cost of less than \$0.60/watt. Many of these technologies are in exploratory or early research stages but still can be evaluated according to their material requirements, processing complexity, and potential scalability. For example, concepts that utilize GaAs or CIGS may have cost issues or material availability issues. Similarly, complex cell designs or designs that feature nano...</p>	Lawrence Berkeley National Laboratory	07/28/2010
 Solar Photovoltaic	<p>Sputtered Thin Film Photovoltaics</p> <p>The Naval Research Laboratory (NRL) has developed a suite of processes for the fabrication of bulk and sputtered thin film copper indium gallium diselenide (CIGS) and related materials for photovoltaic (PV) applications....</p>	Naval Research Laboratory	03/19/2012 New!
 Energy Analysis	<p>Pulse Analysis Spectroradiometer System (PASS) Software</p> <p>Flashing artificial light sources are used extensively in photovoltaic module performance testing and plant production lines. There are several means of attempting to measure the spectral distribution of a flash of light; however, many of these approaches generally capture the entire pulse energy. We report here on the design and performance of a system to capture the waveform of flash at individual</p>	National Renewable Energy Laboratory	02/02/2010

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Energy Storage Technology Marketing Summaries



Here you'll find marketing summaries of energy storage technologies available for licensing from U.S. Department of Energy laboratories and participating research institutions. The summaries provide descriptions of the technologies including their benefits, applications and industries, and development stage.

82 Technology Marketing Summaries			
Category	Title and Abstract ↓	Partners ↓	Date ↓
Energy Storage Hydrogen and Fuel Cell	<p>Ultrafine Hydrogen Storage Powders</p> <p>This invention provides for composition and method of making extremely fine powders for storing hydrogen.</p>	<p>Ames Laboratory</p>	12/16/2010
Advanced Materials Energy Storage Hydrogen and Fuel Cell	<p>Method of Production of Pure Hydrogen Near Room Temperature From Ultra High Capacity Hydride Materials</p> <p>This is a cost-effective method for the production of pure hydrogen gas from ultra high capacity hydride solid materials.</p>	<p>Ames Laboratory</p>	09/22/2011
Energy Storage	<p>High-performance Electrochemical Capacitors</p> <p>A capacitor comprising an anode, cathode, and an electrolyte, wherein the anode, the cathode, or both comprise a composite of porous carbon structure with a coating on the surface of MnO₂, and a current collector in electrical contact with the composite</p>	<p>Naval Research Laboratory</p>	05/23/2011
Energy Analysis Energy Storage Industrial Technologies	<p>Fiber-Optic Environmental Radiation Dosimeter</p> <p>All-optical, fiber-optic-coupled remote radiation sensor using NRL's luminescent, copper-doped quartz material. The key to the technology is the doped quartz material that produces a luminescence signal that is directly proportional to the radiation dose. Individual sensors have an estimated cost of \$50 and a lifespan of decades. The sensor is less than 7 mm in diameter by 10 cm in length and is fiber-optic-coupled to a photodetector that is remotely located away from the potential radiation source.</p>	<p>Naval Research Laboratory</p>	10/06/2011
Energy Storage	<p>Polyanionic Polymers with High Alkali-Ion Conductivity and Wide Electrochemical Windows</p> <p>As mobile electronics continue to evolve, the need for high-output, long-lasting</p>	<p>DOE Grant Recipients</p>	03/13/2012 New!