



Patient ID Service

<http://design.patientidservice.us/>

# \* Thank You

## \* Kantara Initiative

\* Healthcare Identity Assurance Work Group, Chairs: John Fraser, Pete Palmer, Rick Moore

\* Open ID Foundation of Japan, Nat Sakimura

## \* My Partners at eCitizen

\* Dazza Greenwood

\* Daniel Bennett

<http://design.patientservice.us/>

## Patient ID Service: Design

An Open Architecture Research and Development Project



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### Patient ID Service (PIDS)

The Markle Foundation in its Health Consumer Authentication publication (available at <http://www.markle.org/health/markle-common-framework/connecting-consumers/ct2>) of January, 2008 concluded that there is a "Need for a New Approach" to patient identification and authentication in the evolving networked world of healthcare. The Kantara Initiative's Healthcare Identity Assurance Workgroup, the eCitizen Foundation, and the OpenID Foundation of Japan created a collaboration to develop a new approach by initiating the Patient Identity Service (PIDS) project. The project benefits from and leverages significant previous work done to fill the need for patient identification and authentication.

Healthcare will be conducted in an increasingly networked environment in which digital information moves by way of wires and waves rather than in physical documents passed hand to hand. Progress has been made developing the standards, protocols, processes, technology, and business arrangements that determine how health information will travel from point to point but there remains a significant functional gap encompassing identification and authentication of participants, especially patients. The PIDS project will fill some of this particular gap. The focus will be on patients, but PIDS could be used as well by any participants in healthcare or other sectors with little or no adaptation.

#### November 2011

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#### Presentations

[SCA - Kantara PIDS presentation](#)

Presentation at Smart Card Alliance, Kantara Day, November 2011 on Patient ID Service

# \* Patient ID Service (PIDS) Phase 1 -- Design

- \* Research
- \* Survey
- \* Iterate Design
- \* Final Presentation (we are here)
  - \* November 10, 2011 during HIAWG Conference  
Call 1:00 to 2:00 EST;  
[http://kantarainitiative.org/confluence/  
display/healthidassurance/Home](http://kantarainitiative.org/confluence/display/healthidassurance/Home)
- \* Lay ground work for future phases

# \*Patient ID Service (PIDS) Phase 1.5 -- Design

- \*Engage Participants
- \*Raise Funding
- \*Develop project plan to address Policy, Operating Rules/Agreements, Technology
- \*Publish work under open source license

- \* Develop implementations
- \* Write code, documentation, etc.
- \* Certification
- \* Promote project, develop community
- \* Develop future roadmap

**\* PIDS Phase 2.0**

# *Kickoff Announcement*



***SAVE THE DATE***

**PATIENT IDENTITY SERVICE  
PROJECT LAUNCH**

**\* MARCH 3, 2011  
1:00PM - 2:00PM Eastern Time  
Phone Conference Call**

A Key to Meaningful Use: Patient Identity and Authentication

Building on Current Technology to Enable "Meaningful Use" Transactions

Open Architecture for Citizen-Centered Solutions

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## Background

How do you know who a patient is? Why know who a patient is? Is the person who is requesting a record or treatment or services truly Jane Doe or John Smith as claimed? The need for patient identification and authentication has long been recognized. The Markle Foundation calls it, "A Critical Problem of the Digital Age." Is the right treatment being provided to the right person? Is the correct account being charged for the medicine provided? Is the proper information being studied to determine treatment? Is the right record delivered to the right person? Studies and anecdotes provide a convincing case that not being able to identify patients contributes to waste, fraud and abuse, improper payments, faulty and even dangerous treatments and a host of other negative outcomes. Unnecessary costs, for example repetition or duplication of testing, are tolerated at least in part in an effort to ensure that, yes, indeed, a particular individual is who she claims to be and the information available, possibly from another provider or lab or from the patient, does apply to this particular patient.

The U.S. and other nations are currently transforming large portions of healthcare service and delivery to electronic systems. The U.S. is devoting substantial resources, billions of dollars, to catalyze the adoption and use of electronic health record systems, to develop Health Information Exchanges (HIE's) and Health Benefit Exchanges (HBE's). One core set of functional requirements necessary, yet inadequately addressed, to facilitate the operation of HIE's, HBE's, and use of electronic health record (EHR) systems and personal health record (PHR) systems are those functions related to patient identity. There is a "community" of experts and practitioners who focus on the policy, business and technology of determining who is who and creating the systems to perform the appropriate related functions. The inhabitants of this "identity world" recognize these functions of patient identity as identification and authentication. The healthcare world may more readily recognize these functions as patient matching or similar terms. While these terms are not

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### Patient ID Service (PIDS)





- \* SAFE BioPharma:  
<http://www.safe-biopharma.org/>
- \* eAuthentication Initiative/eAuthentication Partnership
- \* HSPD-12/OMB 11-11/FIPS 201/NIST SP 800-63/FICAM, etc.
- \* Liberty Alliance - Kantara Initiative Identity Assurance Framework
- \* HIMSS/GSA National eAuthentication White Paper:  
<http://www.himss.org/content/files/GSAwhitepaper.pdf>

\* **Background**

- \*The Markle Foundation calls it, “A Critical Problem of the Digital Age.” CT2: Authentication of Consumers  
<http://www.markle.org/sites/default/files/CT2.pdf>
- \*Health IT Standards Panel: Identity Credentials Management (ICM) subcommittee of Security, Privacy and Infrastructure Committee,  
<http://www.hitsp.org/>
- \*National Strategy for Trusted Identities in Cyberspace, <http://www.nist.gov/nstic/>,  
<http://www.nstic.us/>

\* **Background**

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## Vision and Overview

The Patient ID Service (PIDS) project, initiated in 2010, commenced with a focused "Design Phase" to map out an open, shared architecture to provide a comprehensive, federated approach to patient identification and authentication for healthcare use.

The architecture is designed to allow for great flexibility in the use, update, and exchange of components that meet functional requirements. This project, during early stages, is focused on employing existing business, legal and technology components to address immediate and short-term needs for patient identity functions. Some examples of how the architecture is expected to serve include: facilitating healthcare providers' meeting of "Meaningful Use" requirements and in the implementation of Health Information Exchanges, Electronic Health Record (EHR) or Personal Health Record (PHR) systems. PIDS is designed to deliver capabilities to patients to participate significantly in their own healthcare, access, and to the extent appropriate, control their personal health information. As the project progresses and gaps are identified and new applications for the architecture are identified further efforts will be undertaken to address these needs.

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[SCA - Kantara PIDS presentation](#)

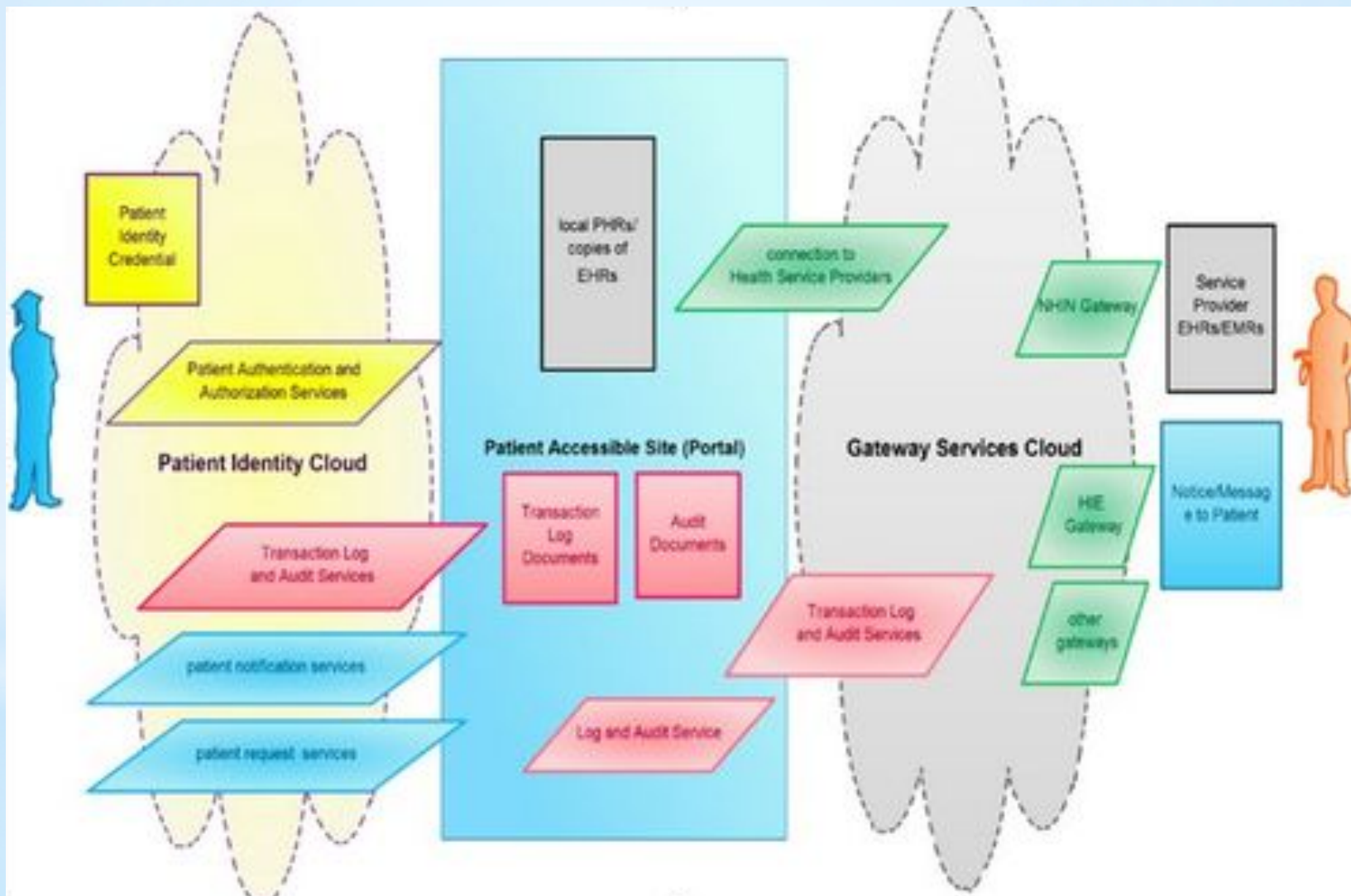
Presentation at Smart Card Alliance, Kantara Day, November 2011 on Patient ID Service

- \* Leverage the work of the Kantara Initiative to solve national (international?) problem
- \* Healthcare Identity Assurance Work Group & eCitizen Foundation, OpenID of Japan collaboration
- \* Design, Implement, Publish, Share an Open Architecture for Patient Identity addressing Business, Legal, and Technical requirements
- \* Develop at least three implementations of PIDS to demonstrate interoperability and obtain certification

## \* PIDS Overview

# \* PIDS Overview

- \* Architecture to allow flexibility in choice of components that meet functional requirements.
- \* Focus on use of existing business, legal and technology components to address immediate and short-term needs for patient identity functions.
- \* Leverage existing credentials by providing functionality to attain Assurance Level 3
- \* Facilitate healthcare providers' meeting of "Meaningful Use" requirements and in the implementation of Health Information Exchanges, Electronic Health Record (EHR) or Personal Health Record (PHR) systems.
- \* Deliver capabilities to patients to participate significantly in their own healthcare, access, and to the extent appropriate, control their personal health information.
- \* Identify gaps are identified and new applications for the architecture and develop further efforts to address these needs.



\* A student attending college out of state requires medical treatment. Information and records of prior treatment from her home state doctor will be helpful in the new case. The student chooses to request the prior records, receiving a copy, storing these in a personal health record and forwarding a copy to the new doctor.

\* Use Case

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## Project Materials

The PIDS Design Phase included research and inquiry as part of the discovery process to develop and define the needs, requirements and constraints to pass forward to the implementation phase.

The PIDS project commenced with an [Online Launch Event](#), at which the principals described the overview and intentions for the project.

Much of the information related to this research and other project materials are available at the [eCitizen Foundation's Patient Identity Page](#). This research included a [field survey](#). In addition, the following eCitizen Research Paper on URL's for Electronic Health Records provides a description of the technical approach to using the architecture of the web as part of the design assumptions for this identity service: <http://ecitizenproject.org/ideafactory/urls-for-electronic-health-records>

### Online Media and Presentations

- The following statements by Jeremy Grant, head of the federal government's initiative for a National Strategy for Trusted Identities in Cyberspace (NSTIC), and David Temoshok of the GSA, who is currently focused on NSTIC, were delivered at the eCitizen workshop on digital identity in the healthcare sector, held at the MIT Media Lab.

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# \* Survey and Research

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## Solution Design

Below is a concept video done in collaboration with the MIT New Media Medicine lab, describes the benefits and approach of using an OpenID style access for Patient Health Records and for patient control of access and consents.



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### Patient ID Service (PIDS)



## \* Overview of Solution Design:

\* The design principles for the Patient ID Service are to create an open architecture, leveraging open standards, for a citizen-centered solution. As such, the proposed design puts the user - in this case a patient - in the driver's seat. The PIDS design 1) empowers the user to configure important aspects of a personal identity account, 2) enables relying parties such as providers of patient portals, to accept the PIDS as a log-in for the patient, and 3) can be used by the patient to both organize their many health related identifiers and permissions as well as to access many different applications and services.

# \* Solution -- Overview

- \* **Outline of PIDS Sign-Up and Usage Process**
- \* Patient Creates a voluntary PIDS Account
  - \* Patient is issued PIDS OpenID Identifier, or External OpenID is bound to PIDS account
  - \* Patient inputs additional healthcare relevant identifiers into PIDS "wallet"
  - \* External Authentication Tokens are bound to PIDS account
- \* Patient configures permissions for PIDS account
- \* Patient logs in to Relying Party systems with PIDS credential
- \* Relying Party challenges for a higher level of authentication (optional)
- \* Patient generates reports from PIDS system (activity logs, linked accounts)

## \* **Solution - PIDS Enrollment**

## \*Technical Components

- \* A simple account system with identity information from each account holding patient information, including first, last name, phone, address, etc.
- \* A URI/URL for each Patient Account
- \* SAML Service, such as Shibboleth, capable of sending and receiving assertions according to the NwHIN standards

## \*Solution - Technical Components

# \* Solution - Technical Components

- \* PIDS Credential, Identifier and Token Capability
  - \* An OpenID service
  - \* An Advanced Credentialing and Token issuance or adoption service (enabling a patient to use, bind and/or link different identity tokens to their PIDS account), for example:
    - \* X.509v3 digital certificate
    - \* Registered Mobile Phone for voice and/or text and/or keypad-based verification
    - \* Registered Smart Phone for Mobile Phone functions plus application functions
    - \* RSA Data Security Key Fob
    - \* PIV, PIV-I or other variations of these Cards
    - \* Authentication as a Service account linkage, enabling the account credentials to be linked to KBA, crypto-based and other methods
    - \* Authorization as a Service account linkage, enabling the account credential to be linked to UACS/RBAC and XACML types of services
    - \* eSignature Service, enabling the use of credential to assent to or otherwise approve a document, signify consent or perform other related transactions
  - \* Credential Suspension/De-linking/De-binding and Termination Service
  - \* (option) Time Stamp Service and other real-time audit-friendly tools (e.g. GIS, HTTP logs, etc)
- \* OpenID Connect and Oauth Services (as they come available)
- \* Audit and Logging Service

- \* PIDS work will Identify Gaps
- \* One such is Step Up Authentication
- \* Working with OASIS “Trust Elevation Technical Committee”
- \* Open Identity Attribute Exchange Summit
  - \* <http://www.eventbrite.com/event/2266130056>

\* OASIS TC

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Patient ID Service (PIDS)







# \* Identity in Healthcare--MIT



Health and Wellness Innovation  
2011

Organized by John Moore MD & Scott Gilroy



MIT Interim Session  
Coding sprint for  
development of  
function components of  
use in PIDS

\* MIT New Media  
Medicine

# \*PIDS Phase 1.5 & 2.0

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## Proposal

The Proposal to Move Forward From Design to Implementation is...

- Describe Phase 1.5
- Describe Phase 2
- Describe Process for Getting Involved Now
  - Funders
  - Participants
  - Subject Matter Experts
  - Advocates
  - Patients and Doctors
  - Standards and Trade Groups
  - Technology Vendors
- More Information/contact request (Webform)
- Schedule of "Next Step" Meetings or Events (Texas? Other?)

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**\* PIDS Phase 2.0**

## ➔ HIMSS 2012 Interoperability Showcase

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### ONC and FHA Area Call for Participants

*Is your organization successfully using nationally recognized standards to securely share patient data with other organizations? Demonstrate your successes within the Office of the National Coordinator for Health IT (ONC) and Federal Health Architecture (FHA) area in the HIMSS 2012 Interoperability Showcase!*



ONC and FHA are looking to highlight cutting-edge interoperable health information exchange at HIMSS 2012, with a focus on ONC-related initiatives, including:

- Nationwide Health Information Network
- CONNECT
- Direct Project
- State HIE Programs
- S&I Framework
- SHARP Program
- Regional Extension Centers
- Beacon Communities



# \* ONC Demonstration @ HIMSS

# University of Texas



WHAT STARTS HERE CHANGES THE WORLD  
THE UNIVERSITY OF TEXAS AT AUSTIN

THE CENTER FOR

## IDENTITY



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## About the Center for Identity

The Center for Identity at The University of Texas is delivering groundbreaking research, education and outreach making it possible for citizens, corporations and government agencies to anticipate and mitigate current and future identity threats. The Center offers innovations to uniquely define and protect the identities of people, organizations, and devices against fraud and abuse in both cyber and physical environments.

*Identity definition, enrollment and authentication is vital to every trusted transaction in every aspect of our lives – healthcare, government, national security, financial services, consumer services, energy, social networking.*

- \* UT, Austin - Center for Identity,  
<http://identity.utexas.edu/>
- \* ID360, [ID360.us](http://ID360.us)
- \* Conference - Late April

**\* University of Texas -  
ID360**



- \*CEO, eCitizen Foundation,
  - \*<http://www.ecitizenfoundation.org/>
  - \*[dancombs@ecitizenfoundation.org](mailto:dancombs@ecitizenfoundation.org)
  - \*[dancombs1@gmail.com](mailto:dancombs1@gmail.com)

\***Dan Combs**