

Medsphere.org: Released

21st VCM, George Mason University, Fairfax, Va.
Ben Mehling



Medsphere[®]
Transforming Healthcare Through Open Source

About Medsphere.org

- Launched in February 2007 – Hosted static information about Medsphere's open source projects (OpenVista Server and CIS).
- Over the past three years a number of supporting projects have been released and posted (Strongwind, Widgets, GTK# installers, etc.)
- In September 2008, Medsphere invested significantly in transitioning Medsphere.org from a static "download" site, to a community collaboration site.
 - Wiki, Discussions, Blogs, Mirrors, Tools, Proposals, etc.
 - Community Calls
 - Work Groups
 - Downloads hosted at SF.net
 - Open development hosted at LP.net

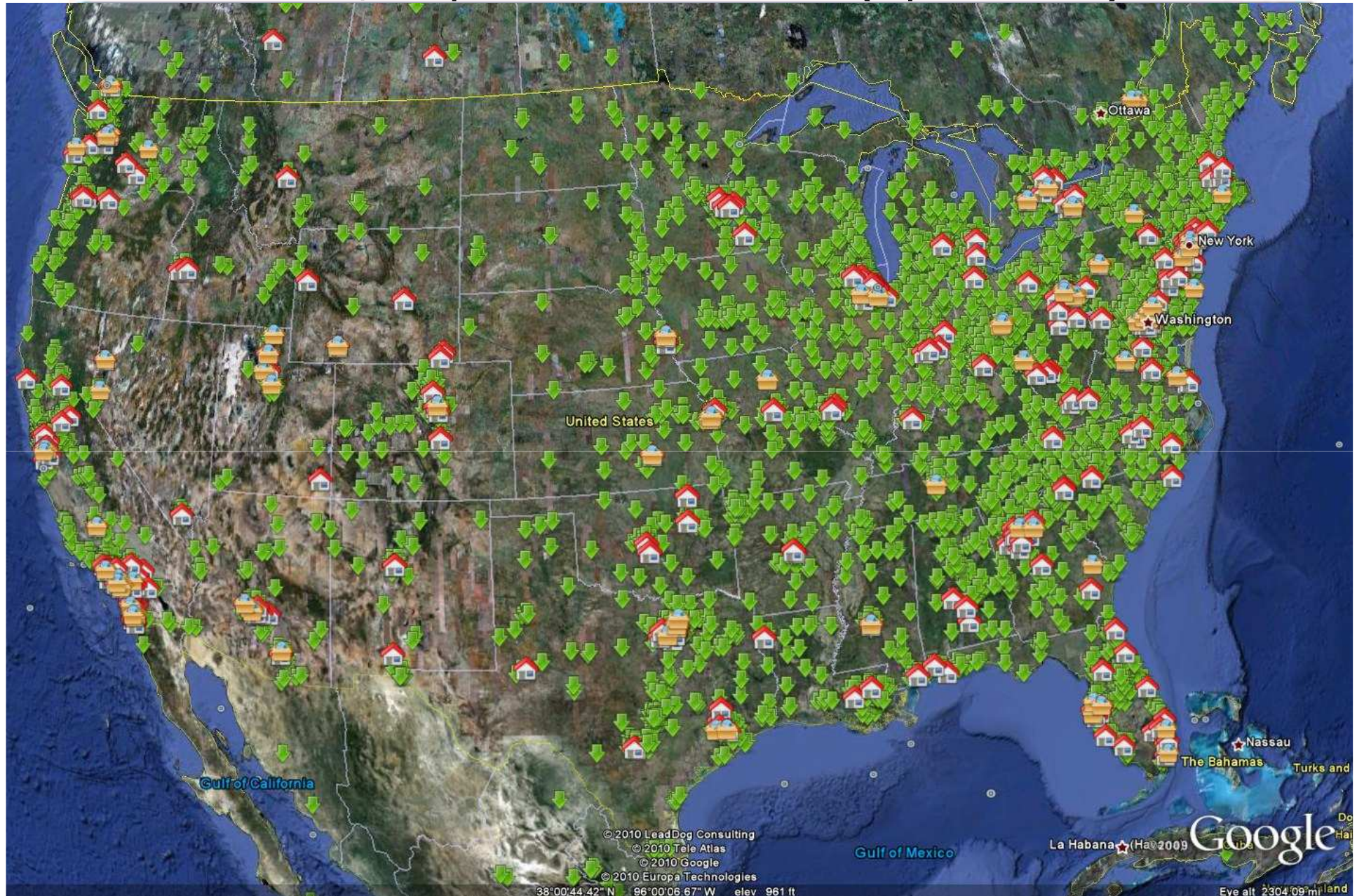
Quick Tour

- Home page
 - Announcements
 - Quick access to content, search, tour
 - Search tool
- Blogs
- New and Updated
- Special Interest Groups
- Communities

Interested in collaborating? Join here:

<http://medsphere.org/tour/>

Users, Repos & Downloads (April 2010)



Users, Repos & Downloads (April 2010)



Project & Release Methodology

What gets released?

- Core Clinicals
- Development Platforms and Frameworks
- Ancillary Tools and Operational Functions

Where's the code?

- Periodic code releases as tarballs
- Open code repositories

Open development process

- Use of code review and merge proposals into open repos
- Public enhancement/defect tracking
- Launch projects as interest and resources present themselves

Licensure Philosophy

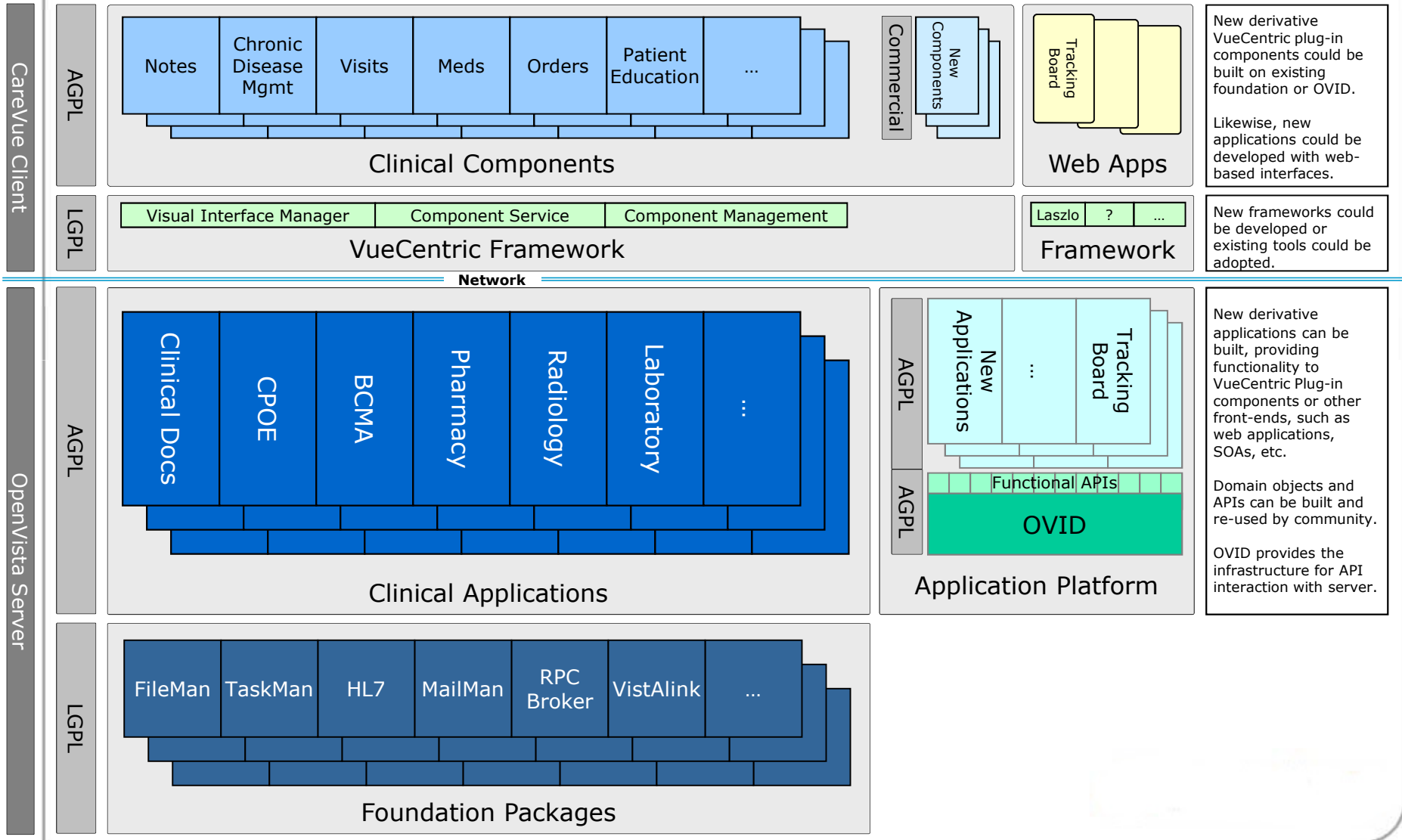
Open Source Licensure

- Licenses are granted by copyright holder
- 100s of licenses attempting to solve different problems
- Two main license certification organizations (OSI & FSF)

Medsphere Philosophy

- License selection should align with goals of project, community, individual participants, and technology
- Why AGPL/LGPL?
 - Provides freedom to collaborate and innovate
 - Protects community – code returned to the commons
 - Certified by both OSI and FSF

Medsphere Licensure Stack



Community Validation

On Medsphere.org: "***which is the best community site in the health FOSS industry***"

On Medsphere's open development and expertise: "***we need to fully endorse whatever party is actually making progress on the problem. So far, that is Medsphere. In open source doers rule.***"

– Fred Trotter, O/S Health Advocate and 'Hacktivist'

Fostering an Active Community

Black Duck Software, which maintains a knowledgebase of more than 200,000 open source projects, recently announced results of research focused on open source healthcare software. They listed the top 10 healthcare projects, of which VistA was one.

Black Duck also identified healthcare software projects where community contributions are strongest:

*"Projects dealing with electronic health records management, practice management and VistA, the health care information management system developed by the US Veterans Administration, **lead in project community activity.**"*

OpenVista, an open-source version of VistA, is among the most active health care projects in the open source community as tracked by the Black Duck KnowledgeBase."

OpenVista Server



OpenVista Server is derived from the VA Freedom of Information Act (FOIA) VistA server release and includes defect corrections and a selection of commercial enhancements equivalent to what has been released at Medsphere client sites.

Vital stats:

- Originally released: May 2007
- License: Applications: AGPL / Foundation: LGPL
- Technologies: M
- Downloads: Open Repository & 11,000+
- Home: <http://medsphere.org/community/project/openvista-server>

Highlights

- Latest release is substantially similar to customer sites
- Latest release is sustainable (i.e., patches published)
- Includes commercialization work, including standard interface portfolio developed for customer sites
- Available as routine/global exports or Cache.dat

Note: Demo data substantially reduced compared to original release.

OpenVista CIS



OpenVista Clinical Information System (CIS) is a cross platform application based on C# and [Gtk#](#) / [GTK](#). CIS runs on the [MS](#) and [Mono](#) .NET frameworks. It is based on the design of the VA's Computerized Patient Record System (CPRS) along with image viewing, and other commercial enhancements.

Vital stats:

- Originally released: February 2007
- License: AGPL, GPL, LGPL
- Technologies: C#
- Downloads: Open Repository & 15,000+
- Home: <http://medsphere.org/community/project/openvista-cis>

Features

- Full revision history at <https://launchpad.net/openvista-cis>
- Cross-platform: MS Windows, GNU/Linux, and Mac*
- Full support for A11Y
- Full support for I18N/L10N (partial translations for German, Spanish, Portuguese, and Thai)
- Integrated imaging support
- Reusable Graph and Grid components
- Inline/reusable spell checking
- Patient Growth Charts
- Medication Reconciliation (In the Meds tab)

* Requires some work – not a target platform



LOPEZ, KYLE
 Age/Sex: 7 (Male)
 MRN: 233124545
 Wt: 21.772 kg
 Ht: 110 cm
 BMI/BSA: 18.0 (0.82)

PEDS 4A101-2
 Provider: USER, PHYSICIAN
 Admit DX: seizure
 Admitted: 11/7/2006 11:39:47 AM
 Acct #

Postings:
Alerts:

Care Team
 Admitting MD: MURPHY, JESSICA
 Attending MD: MURPHY, JESSICA

New Note...
 Edit
 Delete

Default: Last 100 Signed Notes

Date	Title
12/20/2006	GROUP NOTE
12/20/2006	MH GROUP NOTE
10/20/2006	PHYSICAL THERAPY CON
8/16/2006	PEDI CARDIOLOGY PROG
8/16/2006	NURSING ASSESSMENT
8/16/2006	PEDI PROGRESS NOTE
8/16/2006	NURSING ASSESSMENT
8/15/2006	NURSING ASSESSMENT
8/15/2006	PEDI NEUROLOGY PROG
8/15/2006	PEDI PROGRESS NOTE
8/15/2006	PEDI CARDIOLOGY PROG
8/17/2006	Addendum to PEDI CARI
8/15/2006	EEG REPORT
8/15/2006	NURSING ASSESSMENT
8/15/2006	PEDI CARDIOLOGY CON
8/15/2006	NURSING ASSESSMENT
8/14/2006	NURSING NOTE
8/14/2006	NURSING NOTE
8/14/2006	PEDI NEUROLOGY CONS
8/14/2006	PEDI ADMIT NOTE

Adm: 8/14/2006 PEDI CARDIOLOGY PROGRESS NOTE, 4A -PEDIATRICS, OLSON, KENNETH (8/16/2006 8:15 AM)

TITLE: PEDI CARDIOLOGY PROGRESS NOTE
 DATE OF NOTE: AUG 16, 2006@08:15 ENTRY DATE: AUG 17, 2006@14:15:09
 AUTHOR: OLSON, KENNETH EXP. COSTGNFR:
 URGENCY: STATUS: COMPLETED

S: Kyle underwent his echo today without difficulty

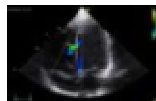
O:

VITALS:
 T: 99 F [37.2 C] (08/17/2006 06:20)
 P: 99 (08/17/2006 06:20)
 BP: 104/58 (08/17/2006 06:20)
 RR: 15 (08/17/2006 06:20)
 Pain:
 WEIGHT: 48 lb [21.8 kg] (08/14/2006 15:30)

GENERAL:
 This is a well developed, well nourished, MALE
 in no acute distress.

Encounter

Images



8/16/2006

Templates

Patient Summary Problem List Medications Orders

Clinical Notes Consults/Procedures Discharge Summary Vital Signs Lab Results Chart Inquiries

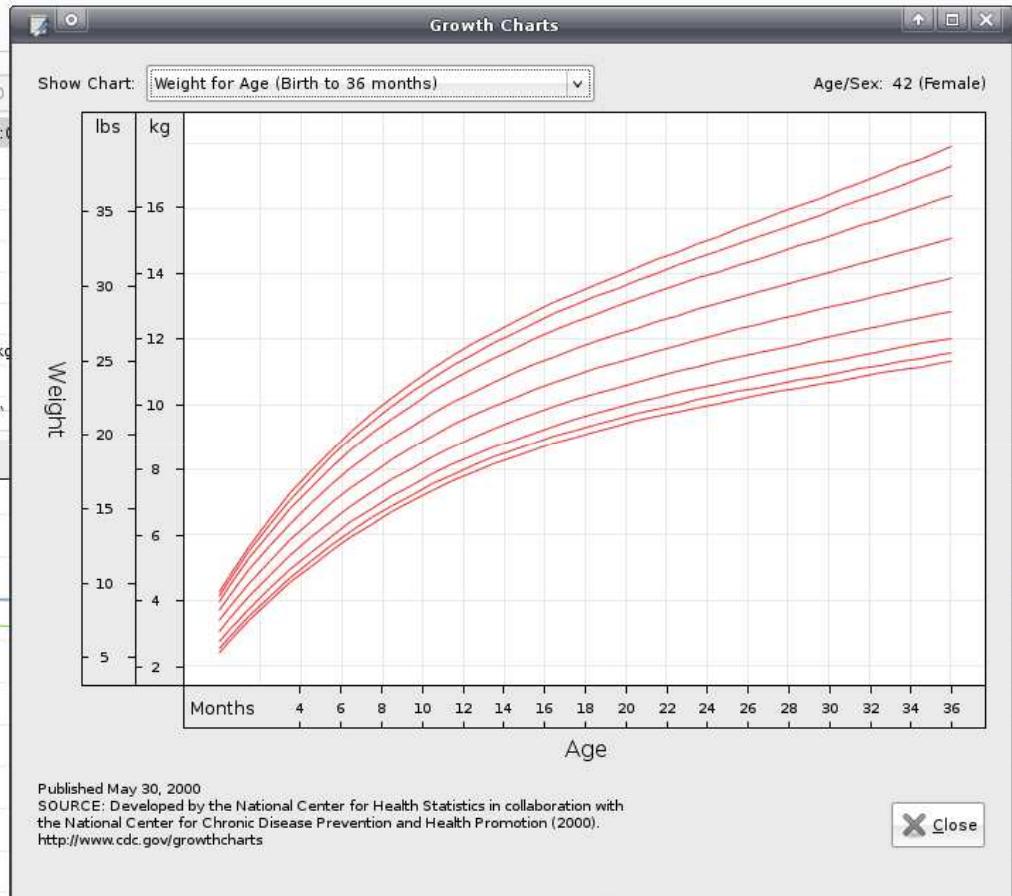
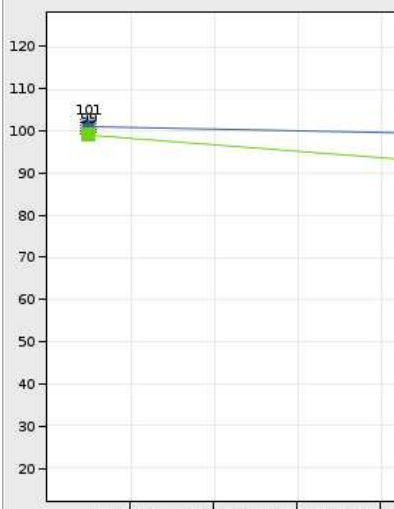


	PATIENT,TEST ONLY	Wt: 45.359 kg	MED1 45401-1	Admitted: 8/23/2006 1:43:20 PM	Postings: AD	Care Team
	MRN: 756110665P	Ht: 182.9 cm	Provider: USER,PHYSICIAN	Acct #:	Alerts:	Admitting MD: MANAGER,SYSTEM
	Age/Sex: 42 (Female)	BMI/BSA: 13.6 (1.52)	Admit Dx: sick			Attending MD: MANAGER,SYSTEM

New Vitals... Entered in Error...

Date: All Results From: 11/6/1825 12:00

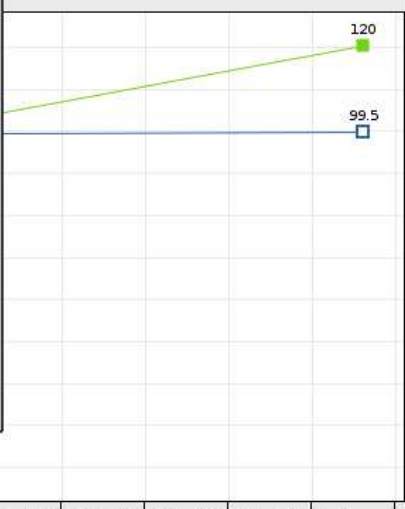
Temperature	10:56:03 AM	11/8/2006 11:00
Pulse		
Respiration		
Pulse Ox.		
L/Min/%		
B/P		
Weight		185 (83.915 kg)
BMI		28.2*



Pediatric Growth Charts

Graph: TPR

2008 10:07:30 PM	5/16/2008 3:15:09 PM
	99.5 (37.5 C)
	120*



3/3/2006 4:54 AM 4/13/2006 5:36 AM 5/24/2006 6:18 AM 7/4/2006 7:00 AM 8/14/2006 7:42 AM 9/24/2006 8:24 AM 11/4/2006 9:06 AM 12/15/2006 9:48 AM 1/25/2007 10:30 AM 3/7/2007 11:12 AM 4/17/2007 11:54 AM 5/28/2007 12:36 PM 7/8/2007 1:18 PM 8/18/2007 2:00 PM 9/28/2007 2:42 PM 11/8/2007 3:24 PM 12/19/2007 4:06 PM 1/29/2008 4:48 PM 3/10/2008 5:30 PM 4/20/2008 6:12 PM

- Patient Summary
- Problem List
- Medications
- Orders
- Clinical Notes
- Consults/Procedures
- Discharge Summary
- Vital Signs
- Lab Results
- Chart Inquiries



	LOPEZ,KYLE	Wt: 21.772 kg	PEDS 4A101-2	Admitted: 11/7/2006 11:39:47 AM	Postings:	Care Team
	Age/Sex: 7 (Male)	Ht: 110 cm	Provider: USER,PHYSICIAN	Acct #:	Alerts:  	Admitting MD: MURPHY,JESSICA
	MRN: 233124545	BMI/BSA: 18.0 (0.82)	Admit Dx: seizure			Attending MD: MURPHY,JESSICA

New Note... Edit Delete

Default: Last 100 Signed Notes Adm: 8/14/2006 EEG REPORT, 4A -PEDIATRICS, GOLDSTEIN,JACOB (8/15/2006 9:00 AM)

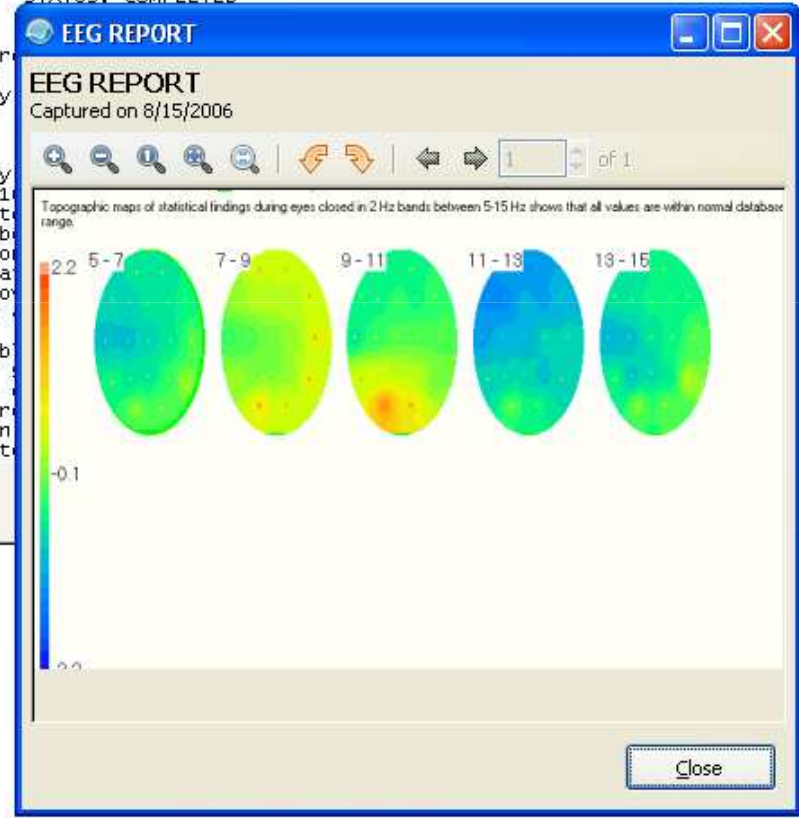
Date	Title
12/20/2006	GROUP NOTE
12/20/2006	MH GROUP NOTE
10/20/2006	PHYSICAL THERAPY
8/16/2006	PEDI CARDIOLOGY F
8/16/2006	NURSING ASSESME
8/16/2006	PEDI PROGRESS NO
8/16/2006	NURSING ASSESME
8/15/2006	NURSING ASSESME
8/15/2006	PEDI NEUROLOGY PI
8/15/2006	PEDI PROGRESS NO
8/15/2006	PEDI CARDIOLOGY F
8/17/2006	Addendum to PEDI C
8/15/2006	EEG REPORT
8/15/2006	NURSING ASSESME
8/15/2006	PEDI CARDIOLOGY C
8/15/2006	NURSING ASSESME
8/14/2006	NURSING NOTE
8/14/2006	NURSING NOTE
8/14/2006	PEDI NEUROLOGY C
8/14/2006	PEDI ADMIT NOTE
8/14/2006	NURSING INITIAL AI
8/14/2006	PEDI NEUROLOGY C

TITLE: EEG REPORT
DATE OF NOTE: AUG 15,2006@09:00
AUTHOR: GOLDSTEIN,JACOB
URGENCY:
ENTRY DATE: AUG 15,2006@09:53:44
EXP COSIGNER:
STATUS: COMPLETED

Reason for Study: seizure disorder, incre
 Medication: phenobarbital 80 mg po dialy

METHODOLOGY Topographic EEG Methodology placed according to the international 10-20 system. A standardized 19 channel (Lexicor system) montage was obtained with linked earlobes. 10 Kohms was required at all sites prior to recording. Signals were fed directly to a quantitative EEG system. They were digitized at a rate at or above 200 Hz, band-pass filtered between 1 and 30 Hz, and analyzed using a fast Fourier transform (FFT) analysis. The client was seated in a comfortable chair, 3.5 meters in front of a video monitor. The client was instructed to rest with eyes closed for 3 minutes. A series of 3 readings (1) eyes open, 2) eyes closed, 3) reading for comprehension difficulty. Digitized data were subjected to statistical analysis.

Encounter
 Images



Templates

Patient Summary	Problem List	Medications	Orders	Clinical Notes	Consults/Procedures	Discharge Summary	Vital Signs	Lab Results	Chart Inquiries
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Support for translation – e.g., French menus & tabs

Medsphere OpenVista® CIS [DEMO] - Reconnu comm

Fichier Édition Affichage Outils Aide

JONES, CHRISTOPHER Wt: **ICU 3N302-1** Admitted: 06/05/2007 08:0
 MRN: 111112001 Ht: Provider: USER,PHYSICIAN Acct #:
 Age/Sex: 58 (Male) BMI/BSA: Admit Dx: chest pain

Problèmes actuels	Allergies / Réactions Défavorables
Obesity	PENICILLIN
Diabetes Mellitus	STRAWBERRIES
Hypertension	LACTOSE
Coronary Artery Disease	ASPIRIN
BACKACHE NOS	SHELL FISH
Acute abscess	
CHF	

Médication Actuel État

No results found.

Recent Lab Results

MYOGLOBIN GREEN-PL PLASMA SP LB #262
TROPONIN I GREEN-PL PLASMA SP LB #263
CKMB GREEN-PL PLASMA SP LB #264
CBC PURPLE-WB BLOOD WC ONCE LB #256
CBC PURPLE-WB BLOOD LC ONCE LB #250
CBC
CARD
CPK
CARD
CBC
CPK
CKME
CREA

Vital English

T	101 F
P	98
R	20
BP	160/90
HT	69.9999999286
WT	212.74608283
PN	2
POX	96
CVP	15 cmH2O

Résultats de laboratoire récents

MYOGLOBIN GREEN-PL PLASMA SP LB #262
TROPONIN I GREEN-PL PLASMA SP LB #263
CKMB GREEN-PL PLASMA SP LB #264
CBC PURPLE-WB BLOOD WC ONCE LB #256
CBC PURPLE-WB BLOOD LC ONCE LB #250
CBC PURPLE-WB BLOOD LC ONCE LB #241
CARDIAC PROFILE GREEN-PL PLASMA WC ONCE LB #
CPK TIGER SERUM WC ONCE LB #239
CARDIAC PROFILE GREEN-PL PLASMA SP LB #200
CBC PURPLE-WB BLOOD SP LB #199
CPK TIGER SERUM SP LB #199

Vital Anglais Métrique Date Date Rendez-

T	101 F	(38.3 C)	02/04,	06/07/2005 09:00:00	CARDIOL
P	98		02/04,	01/09/2005 12:00:00	4 SOUTH
R	20		02/04,	10/02/2006 15:26:00	MH NUC
BP	160/90		02/04,	31/05/2006 09:36:21	3 SOUTH
HT	69.9999999286	in (177.8 cm)	27/03,	31/05/2006 11:28:00	MEDSPH
WT	212.74608283	lb (96.500 kg)	27/03,	14/07/2006 12:46:08	3 SOUTH
PN	2		27/03,	14/07/2006 13:30:00	3 SOUTH
POX	96		27/03,	06/09/2006 10:26:00	3 SOUTH
CVP	15 cmH2O	(11.0 mmHg)	27/03,	03/10/2006 07:23:37	3 SOUTH
				02/01/2007 09:00:00	PRIMARY
				03/01/2007 10:00:00	PRIMARY
				05/03/2007 08:18:00	3 SOUTH

Support for translation – e.g., Russian

Résumé du Patient Liste de Problèmes Médications Ordres Notes Cliniques Consultes/ Procédures Résumé

Пациент резюме Список вопросов Лекарства Orders Клинические Примечания Консультируется/ Процедуры Освобожден Резюме

Support for translation – e.g., Simplified Chinese

		Appr./Visit/Admission Type	Acct #
		秒	CARDIOLOGY OFFICE
		秒	4 SOUTH - MED
		0秒	MH NUCLEAR MEDICINE
4	06-5-31	36分21秒	3 SOUTH - TELEMTRY
1	06-5-31	上11时28分00秒	MEDSPHERE HOSPITAL
3	06-7-14	下12时46分08秒	3 SOUTH - TELEMTRY
3	06-7-14	下01时30分00秒	3 SOUTH - TELEMTRY
3	06-9-6	上10时26分00秒	3 SOUTH - TELEMTRY
3	06-10-3	上07时23分37秒	3 SOUTH - TELEMTRY
	07-1-2	上09时00分00秒	PRIMARY CARE OFFICE
	07-1-3	上10时00分00秒	PRIMARY CARE OFFICE
	07-3-5	上08时18分00秒	3 SOUTH - TELEMTRY
	07-4-26	上07时28分15秒	
	07-4-26	上07时29分14秒	
	07-4-26	上07时37分58秒	
	07-4-26	上07时39分22秒	
	07-4-30	上06时32分15秒	
	07-5-2	上06时37分59秒	2 NORTH - NURSERY
	07-5-6	上08时00分00秒	3 NORTH - ICU
	07-8-9	下02时53分00秒	3 NORTH - ICU

Medsphere OpenVista® CIS [DEMO] - Connected as USER,PHYSICIAN (vista)

Help Tools View Edit File

Care Team
Admitting MD: None
Attending MD: None

Postings:
Alerts:

Visit Not Selected
Provider: USER,PHYSICIAN
Admit Dx: None

SHLEY
567899
Female)

Group Notes
Vitals
Up to Date
Micromedex

Enter/Edit Electronic Signature...
Pharmacokinetic Dosing Calculator

Attach Images or Scanned Documents
View Images and Scanned Documents

تفصیلات

Patient Record Flags
No results found.

Allergies / Adverse Reaction
No results found.

Posting Date
No results found.

Due Date Clinical Reminders

DUE NOW	Cervical Cancer Screen/Pap Smear
DUE NOW	Depression Screening
DUE NOW	Tobacco Screening

Location Appt./Visit/Admission Type Date Date Metric English Vitals

No results found. No results found.

Chart Inquiries Vital Signs Notes Lists/Teams Order Checks Alerts General

Date Range Defaults
Change the default date ranges for displaying patient information on your summary tab.
Edit Date Range Defaults...

Clinical Reminders
Configure and arrange which clinical reminders are displayed on your summary tab.
Edit Clinical Reminders...

Other Parameters
Configure default chart tab.
Change display date range on Medications tab.
Change Encounter Appointments date range.
Edit Other Parameters...

موافق
الغاء
تطبيق

inquiries results signs summary procedures

Support for right-to-left language orientation and multiple charsets - e.g., Arabic

JONES, CHRISTOPHER
 Age/Sex: 56 (Male)
 MRN: 111112001

New Note... Edit Delete

Default: Last 100 Signed Notes

Date	Title
5/15/2007	CARDIOLOGY
5/15/2007	INTERNAL MED
5/15/2007	CARDIOLOGY
5/15/2007	CARDIOLOGY
5/15/2007	CARDIOLOGY

- Templates
- Interdisciplinary Team
 - Interdisciplinary Template
 - Lab Letter
 - Latex Allergy Question
 - Medication Reconciliation
 - medication reconciliation
 - Medication reconciliation

- Reminders
- Due
 - Diabetic Eye Exam
 - Diabetic Foot Exam
 - HTN Assess for Elevated BP**
 - Nutrition/Obesity Education
 - PSA
 - Applicable

Reminder Resolution: HTN Assess for Elevated BP >= 140/90

Repeat BP and record below if appropriate

BP 140/

INTERVENTIONS

- Medications Adjusted or Initiated
- Medication change not warranted due to: (click for additional options)

- Patient usually has well-controlled BP on current therapy
- Patient's current therapy is appropriate based on concomitant cardiovascular risk

Incomplete Items (2)

Reminder	Item
HTN Assess for Elevated BP >= 140/90	BP
HTN Assess for Elevated BP >= 140/90	Medication change not warranted due to: (click for additional options)

* Indicates a Required Field Clear Clinical Maint Visit Info Back Forward

HTN Assess for Elevated BP >= 140/90:
 The patient was counseled on the importance of regular exercise and/or physical activity in the control of blood pressure.

Patient Educations: Exercise Education for HTN

Cancel Finish

ERSIDE,JOE
ERSIDE,JOE

Edit



LOPEZ,KYLE
 MRN: 233124545
 Age/Sex: 8 (Male) BMI/BSA: 18.0 (0.82)

PEDS 4A101-2
 Provider: USER,PHYSICIAN
 Admit Dx: seizure
 Admitted: 11/7/2006 11:39:47 AM
 Acct #:

Postings:
Alerts:

Care Team
 Admitting MD: USER,MEDSPHERE TWENTY-FOUR
 Attending MD: USER,MEDSPHERE TWENTY-FOUR

Vitals Input – TPR BP HT WT

- Active Problem
- Down's Syndrome
- Congenital
- Tetralogy of
- Pulmonary V
- Epilepsy, To
- Congestive
- Active Medication
- No results fo
- Recent Lab P
- CBC PURPLE-
- CHEM 20 BLD
- PHENOBARBI
- PHENOBARBI
- PHENOBARBI

LOPEZ,KYLE
 233124545 4/16/2000 (8)

Location: 4A -PEDIATRICS
Date/Time: 7/2/2008 5:29 PM

Template Latest Vitals
 Date/Time Exp. View

- Templates
- System
 - Facility
 - Location
 - 2 NORTH - NURS
 - 2 SOUTH - LABOF
 - 2B - INTERMEDIA
 - * TPR BP HT W**
 - 4A -PEDIATRICS
 - User

Vitals input template: TPR BP HT WT Patient On Pass

#	Unavailable	Refused	Vital	Value	Units	Qualifiers
1.	<input type="checkbox"/>	<input type="checkbox"/>	Temperature:	98.7	F	(ORAL)
2.	<input type="checkbox"/>	<input type="checkbox"/>	Pulse:			(PALPATED,SITTING)
3.	<input type="checkbox"/>	<input type="checkbox"/>	Respiration:			(SPONTANEOUS)
4.	<input type="checkbox"/>	<input type="checkbox"/>	B/P:			(R ARM,CUFF,SITTING,ADULT)
5.	<input type="checkbox"/>	<input type="checkbox"/>	Height:	115	cm	(ACTUAL)
6.	<input type="checkbox"/>	<input type="checkbox"/>	Weight:	23	kg	(ACTUAL)

Latest Vitals


Date & Time	Vital	USS Value	Metric Value	Qualifiers	Entering User
8/17/2006 6:20:00 AM	Temperature	99 F	37.2 C	TYMPANIC	USER,MEDSPHER
8/17/2006 6:20:00 AM	Pulse	99		BRACHIAL, PALPATED	USER,MEDSPHER
8/17/2006 6:20:00 AM	Respiration	15			USER,MEDSPHER
8/17/2006 6:20:00 AM	B/P	104/58 *		R ARM, LYING, CUFF, PEDIATRIC	USER,MEDSPHER
8/14/2006 3:30:00 PM	Height	3 ft 7.3 in	109.98 cm		USER,MEDSPHER
8/14/2006 3:30:00 PM	Weight	48 lb	21.77 kg	ACTUAL	USER,MEDSPHER
	BMI	18.04			

Cancel Save

- 8/14/2006 3:06:20 PM 4A -PEDIATRICS
- 11/7/2006 11:39:47 AM 4A -PEDIATRICS
- 12/10/2006 8:49:00 PM PHYSICAL THERAPY - REHAB
- 12/20/2006 8:41:00 PM PHYSICAL THERAPY - REHAB

Medsphere OpenVista® CIS [OPEN] - Connected as USER,NURSE (localhost)

File Edit View Tools Help

	PATIENT, CLINICAL F MRN: TST900000101 Age/Sex: 54 (Female)	Wt: Ht: BMI/BSA:	ICU 101-1 Provider Not Selected Admit Dx: AUTO ACCIDENT	Admitted: 9/9/2008 3:35:06 AM Acct #:	Postings: Alerts:	Care Team Admitting MD: USER, PHYSICIAN Attending MD: USER, PHYSICIAN
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First study Previous study Next study Last study

Image View File Info Data Sets

Previous Rewind Play Forward Next Zoom In Normal Size **Best Fit** Zoom Out 250 ms

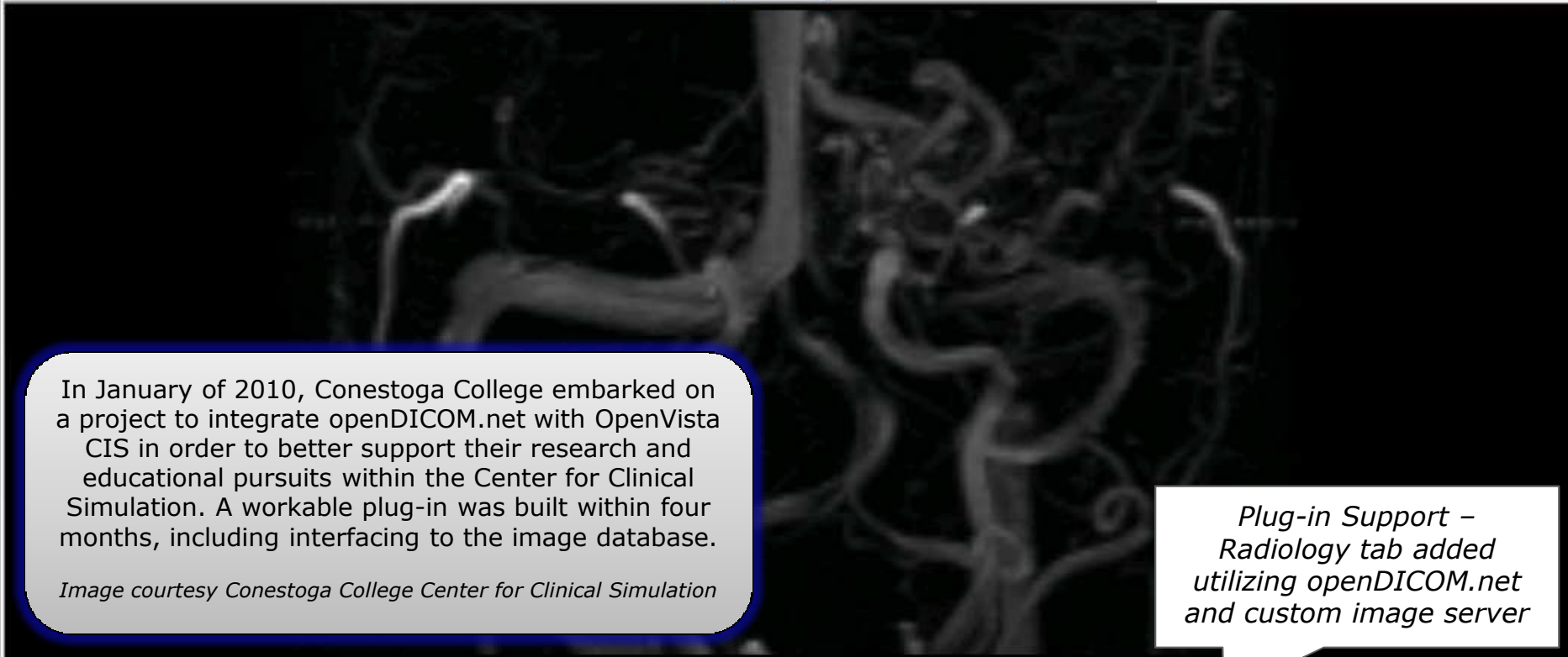


Image: 1/1, Zoom: 407%, Brightness: 100%

Patient Summary Problem List Medications Orders Clinical Notes Consults/Procedures Discharge Summary Vital Signs Lab Results Chart Inquiries Radiology

powered by **medsphere**

In January of 2010, Conestoga College embarked on a project to integrate openDICOM.net with OpenVista CIS in order to better support their research and educational pursuits within the Center for Clinical Simulation. A workable plug-in was built within four months, including interfacing to the image database.

Image courtesy Conestoga College Center for Clinical Simulation

*Plug-in Support -
Radiology tab added
utilizing openDICOM.net
and custom image server*

OpenVista Appliance



The OpenVista Appliance is a virtual machine hosting the entire OpenVista stack from operating system to clinical front-end.

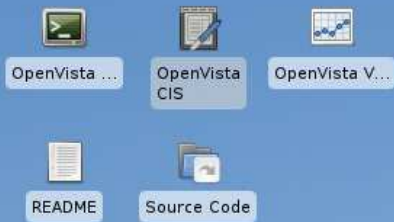
- Source code included
- Networking configured for inbound client connections
- Client software downloadable from network share
- Note: reduced demo patient data from previous releases

Vital stats:

- Originally released: May 2007 // Latest release: June 2010
- License: by project – completely FOSS
- Technologies: Mixed
- Downloads: 6,400+
- <http://medsphere.org/community/project/openvista-appliance>

Included Software (r6)

- OpenVista CIS 0.9.96 (1.0 Release Candidate 2)
- OpenVista Server 1.5 Service Pack 4
- OVID 1.0.0
 - Patient Dashboard demonstration application
- FMQL 0.22
- FM Projection (trunk r5)
- GT.M V5.4-000
- Xubuntu 10.04 LTS "Lucid Lynx"
 - Apache
 - Samba



Experience
FREE
Open S

Connect to Medsphere OpenVista® Sen



v0.9.9-1082

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Welcome to a copy of the Medsphere OpenVista demo server taken on 2008-05-18

Login ID

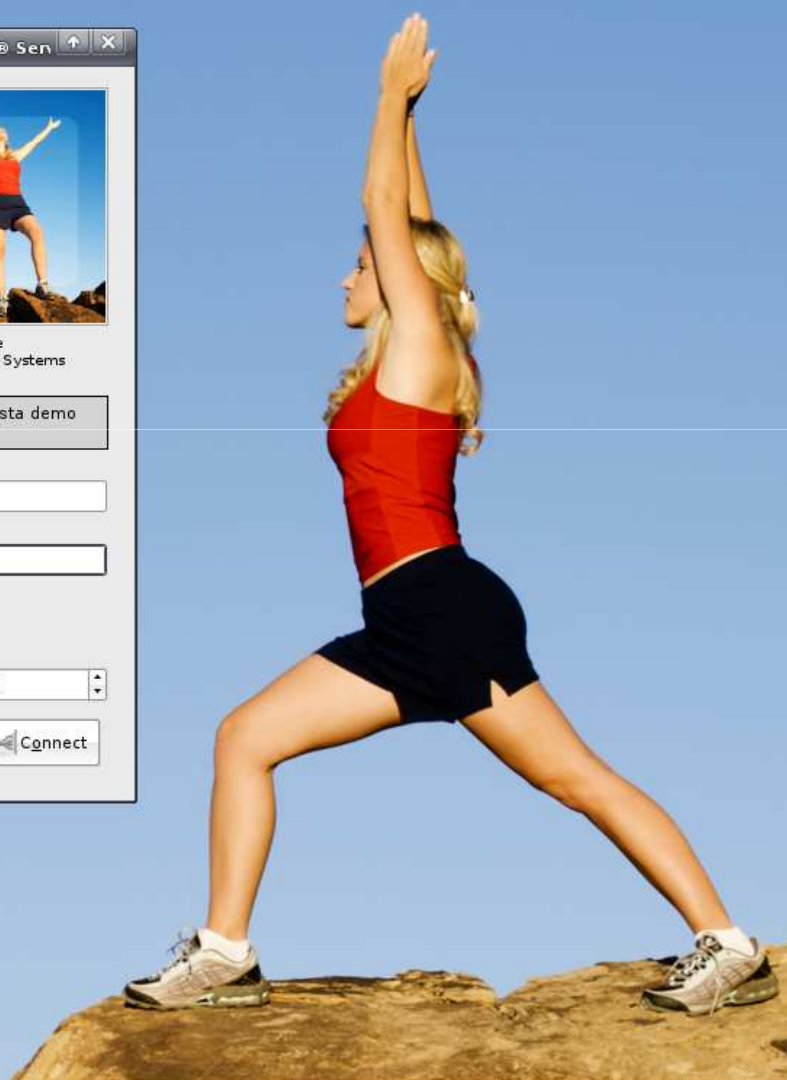
Password

Change Password on Connect

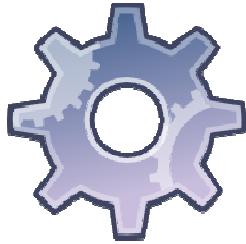
Options

Server: localhost Port: 7979

Cancel Connect



OVID



The OVID (OpenVista Interface Domain) layer is a set of development tools designed to enable software developers easier access to OpenVista data and applications.

OVID is a foundational technology that allows developers to build upon OpenVista (and Vista derivatives) using alternative languages (such as Java) or architectures (such as Web Services/SOA).

Vital stats:

- Originally released: April 2009
- License: AGPL
- Technologies: M, Java
- Downloads: Open Repository & 2000+
- Home: <http://medsphere.org/community/project/ovid>
- Recent whitepaper: <http://www.medsphere.com/ovid-white-paper>

OVID Technical Capabilities

- Useful for building on the OpenVista/Vista platform:
 - Traditional applications
 - Web/Mobile applications
 - Exposing OpenVista data/logic as Web Services
 - Console based applications
 - Automation and Integration
- Ability to create M to Java calls, allowing M applications to call external Java APIs
- Ability to create Java to M calls, allowing Java applications to call into M APIs
- Supports creating Java domain objects

A Platform



Using the OVID technology and framework, community contributors and Medsphere have created new tools and applications:

- Web Services to CCR/CCD gateway
- Web Services to DoD KMR middle tier
- IHS/Medsphere Clinical Flowsheet, Pharmacy and more in development
- iPhone/iPod application to view patient record in real-time
- Registration application built on OVID
- RESTful interface to OpenVista

Sample web front-end

File Edit View History Bookmarks Tools Help

http://localhost:8080/DashBoard/

Most Visited Getting Started Latest BBC Headli... SFEE clearspace medsphere.org MSC Webmail glassfish adm databasics xplanner RPC Reference

Units


- 2 NORTH - NURSERY
- 2 SOUTH - LABOR AND DELIVERY
- 2A - SPINAL CORD
- 2B - INTERMEDIATE
- 3 NORTH - ICU
- 3 SOUTH - TELEMETRY
- 4 NORTH - SURGERY
- 4 SOUTH - MED
- 4A -PEDIATRICS
- 5 NORTH - MED
- 5 SOUTH - PSYCH

Begin Date:

April 2 2006

End Date:

April 2 2009

powered by 

Logout

Name	Enterprise ID	Date Of Birth	Age	Room/Bed	Admitting Diagnosis	Attending Physician	Provider
SMITH,BETTY	111112003	1938/05/05	70	5N501-1	BLOOD IN SPUTUM	USER,MEDSPHERE TWELVE	USER,MEDSPHERE TWELVE
SUTTON,JILL	111112009	1971/01/02	38	5N504-1	LEUKEMIA	USER,MEDSPHERE FORTY-NINE	USER,MEDSPHERE FORTY-NI
MCCRACKEN,PHILLIP	333333333	1952/02/09	57	5N502-1	Diabetes Out of Control	USER,MEDSPHERE TWENTY-FOUR	USER,MEDSPHERE TWENTY-I

Tasks (0) Medications (4) Allergies (4) Problems (4) Unverified Orders (128) Nursing Orders Unsigned by User Results Vitals

Date/Time	Status	Description
2008/02/20 02:27:06	complete	CBC PURPLE-WB BLOOD WC ONCE LB #260
2008/02/20 02:22:00	active	>> Incentive Spirometer...
2008/02/19 05:12:10	pending	CLINDAMYCIN/DEXTROSE INJ,SOLN 500 MG in...
2008/02/19 02:00:00	complete	CBC PURPLE-WB BLOOD WC LB #261
2008/02/15 01:27:00	pending	CBC PURPLE-WB BLOOD WC ONCE LB #257
2008/02/14 08:54:28	active	CULTURE & SUSCEPTIBILITY BLOOD WC LB #254
2008/02/14 08:42:14	complete	CULTURE & SUSCEPTIBILITY BLOOD WC LB #253
2008/02/13 09:19:07	complete	CBC PURPLE-WB BLOOD LC ONCE LB #251
2008/02/13 04:16:26	active	GRAM STAIN SPUTUM WC LB #249
2008/02/12 09:38:00	complete	CBC PURPLE-WB BLOOD SP ONCE LB #246
2008/02/12 09:38:00	complete	BASIC METABOLIC PROFILE TIGER SERUM SP ONCE LB #246
2008/02/12 09:28:18	complete	HEPATIC FUNCTION PANEL TIGER SERUM LC ONCE LB #245
2008/02/12 09:28:18	complete	CHOLESTEROL TIGER SERUM LC ONCE LB #245
2008/02/12 09:28:18	complete	PO4 TIGER SERUM LC ONCE LB #245
2008/02/12 09:28:18	complete	GGT TIGER SERUM LC ONCE LB #245
2008/02/12 09:22:00	pending	DIFF COUNT (BLOOD) BLOOD WC ONCE LB #244
2007/09/14 02:44:00	expired	LEVOFLOXACIN 500MG/DEXTROSE INJ ...
2007/09/14 06:44:00	expired	LISINAPRIL TAB ...
2007/09/12 01:15:00	discontinued	Discontinue LEVOFLOXACIN 500MG/DEXTROSE INJ ...
2007/09/12 01:12:00	discontinued	LEVOFLOXACIN 500MG/DEXTROSE INJ ...
2007/09/11 04:56:00	active	Tubefeeding: OXEPA FULL strength 50 ML/QH Flush with 500ml free water: Q4H.
2007/08/24 09:00:00	discontinued	CHEM 7 BLOOD SERUM LC ONCE LB #213...
2007/08/24 09:00:00	discontinued	CHEM 7 BLOOD SERUM LC ONCE LB #212...
2007/08/24 09:00:00	discontinued	CHEM 7 BLOOD SERUM LC ONCE LB #211...

Done

Web Services via OVID

- Sample web services published
- Source available
- See "Creating Web Services with OVID"

```
-<definitions targetNamespace="http://service.ws.ovid.medsphere.com/" name="InstallService">
  -<types>
    -<xsd:schema>
      <xsd:import namespace="http://service.ws.ovid.medsphere.com/" schemaLocation="http://openvista.medsphere.org:8080/demo-service/InstallService?xsd=1"/>
    </xsd:schema>
  </types>
  -<message name="InstallServiceLogin">
    <part name="parameters" element="tns:InstallServiceLogin"/>
  </message>
  -<message name="InstallServiceLoginResponse">
    <part name="parameters" element="tns:InstallServiceLoginResponse"/>
  </message>
  -<message name="AuthenticationServiceException">
    <part name="fault" element="tns:AuthenticationServiceException"/>
  </message>
  -<message name="Ping">
    <part name="parameters" element="tns:Ping"/>
  </message>
  -<message name="PingResponse">
    <part name="parameters" element="tns:PingResponse"/>
  </message>
  -<message name="GetInstallAndPackageInfoByDate">
    <part name="parameters" element="tns:GetInstallAndPackageInfoByDate"/>
  </message>
  -<message name="GetInstallAndPackageInfoByDateResponse">
    <part name="parameters" element="tns:GetInstallAndPackageInfoByDateResponse"/>
  </message>
  -<message name="OvidDomainException">
    <part name="fault" element="tns:OvidDomainException"/>
  </message>
  -<message name="GetInstallInfoByDate">
    <part name="parameters" element="tns:GetInstallInfoByDate"/>
  </message>
  -<message name="GetInstallInfoByDateResponse">
    <part name="parameters" element="tns:GetInstallInfoByDateResponse"/>
  </message>
  -<message name="GetPackageInfoByIEN">
    <part name="parameters" element="tns:GetPackageInfoByIEN"/>
  </message>
</definitions>
```

When to consider OVID

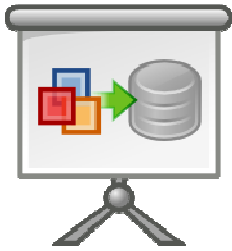
VistA provides a strong *integrated* solution
...but, Integration is a double-edged sword
VistA has not easily adapted to the changing world

OVID can be used in projects with varying goals:

- Extension – or a platform on which to build
- Integration – the glue between disparate systems
- Orchestration – conducting between systems
- Migration – a transitional path to different technology

See: *Extending the Platform* talk, 6/9 @ 9am

FM Projection



FM (File Manager) Projection is a technology that “projects” the data structure of OpenVista into a relational database format.

Users can query against FM data structures using SQL queries and COTS query tools.

See: *Extending the Platform* talk, 6/9 @ 9am

Vital stats:

- Originally released: January 2010
- License: AGPL, LGPL
- Technologies: M, Java, C
- Downloads: Open Code Repository
- Home: <http://medsphere.org/community/project/fm-projection>

FM Projection

Architecture:

- M-engine agnostic (GT.M or Cache)
- Implements a MySQL storage engine that is backed via a network connection to an OpenVista server
- Projection model uses SQLi package

Capabilities:

- Data can then be accessed via J/ODBC data tools and compatible data access development libraries
- A Java-based schema and data viewer is included
- *Current version provides read-only access*

Uses:

- Connect open source or COTS data analysis, reporting, BI tools

GT.M Integration Project



The OpenVista/GT.M Integration Project has released Linux tools and enhancements to OpenVista to meet production environment requirements. The project strives to re-use as much existing infrastructure as possible, encourage best practices by building them into tools, and be familiar to Linux administrators and M/Vista users alike.

See “10 minute” installation on Medsphere.org

Vital stats:

- Originally released: May 2009
- License: AGPL
- Technologies: M, C, Bash
- Downloads: Open Repository & 1,400+
- Home: <http://medsphere.org/community/project/gtm>

Project History

Medsphere had been using GT.M internally for development, QA, and open source efforts for a number of years

- Installation and operation required strong knowledge of Linux
- Installations were not repeatable
- Incompatibilities with Vista

OpenVista/GT.M Integration project started in late 2008

- Published proposals and gathered community and internal requirements and feedback
- All bugs and code published on Launchpad.net
- Initial release May 2009
- Regular releases every month or two

Project Goals

OpenVista, GT.M, and Linux make up a pure open source stack, but they were not specifically designed to work with each other. There is significant value in integrating these components to simplify installation and management.

- Packaging
 - Should be able to “apt-get install openvista”
 - Packaging should follow OS/package management standards
- Management tools
 - Install, backup, restore, and monitor OpenVista instances easily
 - Access instances securely
 - Handle journaling and boot/shutdown tasks automatically
- Platform port of Vista/OpenVista to GT.M
 - Error trap, HL7 and RPC broker management, printing, routine management, switching between instances
 - Find and fix Cache-specific/non-standard M

Future Development

Package more components

- OVID
- Mirth
- OpenVista Server

Wrap more GT.M functionality

- Replication
- Database encryption
- Shared objects on x86_64

Deeper integration with OpenVista

- Developer tools
- Initial configuration
 - Volume set, RPC Broker, TaskMan
- Adding printers
 - CUPS, DEVICE file

Other Releases



Medsphere.Widgets is a collection of cross-platform interface elements for [Gtk#](#) used by Medsphere's products — primarily [OpenVista CIS](#). Some are a composition of standard Gtk# widgets, and others, like [GridView](#) and [Graph](#), are custom managed widgets.

<http://medsphere.org/community/project/medsphere-widgets>



Strongwind is a GUI test automation framework inspired by [dogtail](#). Strongwind is object-oriented and extensible. You can use Strongwind to build object-oriented representations of your applications ("application wrappers"), then reuse the application wrappers to quickly develop many test scripts. Strongwind scripts generate a human-readable log that contains the action, expected result and a screen shot of each step.

<http://medsphere.org/community/project/strongwind>

- Extending the Platform, Wed 6/9 @ 9:00am
- Semantic Web EMR, Wed 6/9 @ 3:15pm
- Medsphere Overview, Fri 6/11 @ 9:00am

Questions

<http://medsphere.org/>

<http://medsphere.org/>



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