GOSCON 2008
Value of OSS to Government

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Open = Transparent

Level of transparency depends on the system being built

Government becoming less opaque: Sunlight Foundation, open data policies, etc...

This Is What We've Got

This Is What We Want: Agility

Sun Tzu:
Know thyself
to know your
enemy

Good Technology
becomes a
Commodity

Why should Gov care?

Agility

- **Rapid assimilation and creation of new capabilities**
- **Capabilities tailored to needs**

Transition

- **Architectures more open / easier to understand & built to**
- **Larger industrial base supporting capabilities**

Cost

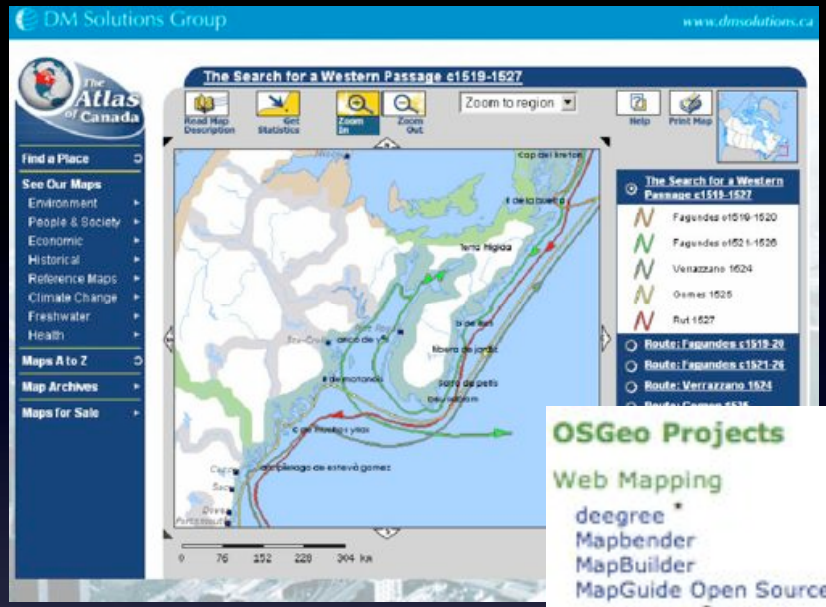
- **Leverage external open source technology investments**
- **Leverage Department investments in technologies**
- **Lower procurement and O&M life cycle costs (perhaps)**

Joint Development (inside DoD & Industry)

- **What technologies can you beg, borrow or steal: Save funds for new development**

Foster *collaboration* across DoD communities on technology acquisition and development

Open Source Geospatial Tools



www.osgeo.org
OSS Geo Group

www.ossim.org
NRO/NGA Certified

www.Ballforge.net: MASINT Open Source Software

Ball Forge.net

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How do I...

Get release notes for CollabNet 4.5.1?
Get help?

Welcome to BallForge

BallForge is an open source development community, supporting the open source projects of Ball Aerospace & Technologies Corp.

What is the BallForge site about?

Ball inspecting NASA's second science satellite (1962)

BallForge is an open source community sponsored by Ball Aerospace & Technologies Corp. Ball Aerospace is a global leader in providing advanced imaging, communications, and information solutions to the government and commercial aerospace markets. Ball Aerospace's services and software supports national policy-makers, the military services, NASA, and other U.S. government agencies, as well as numerous aerospace industry allies.

Ball Aerospace strives to be at the forefront of technology. BallForge was created to allow Ball Aerospace to participate in open source software development and encourage the free exchange of ideas and information to create a technology incubator.

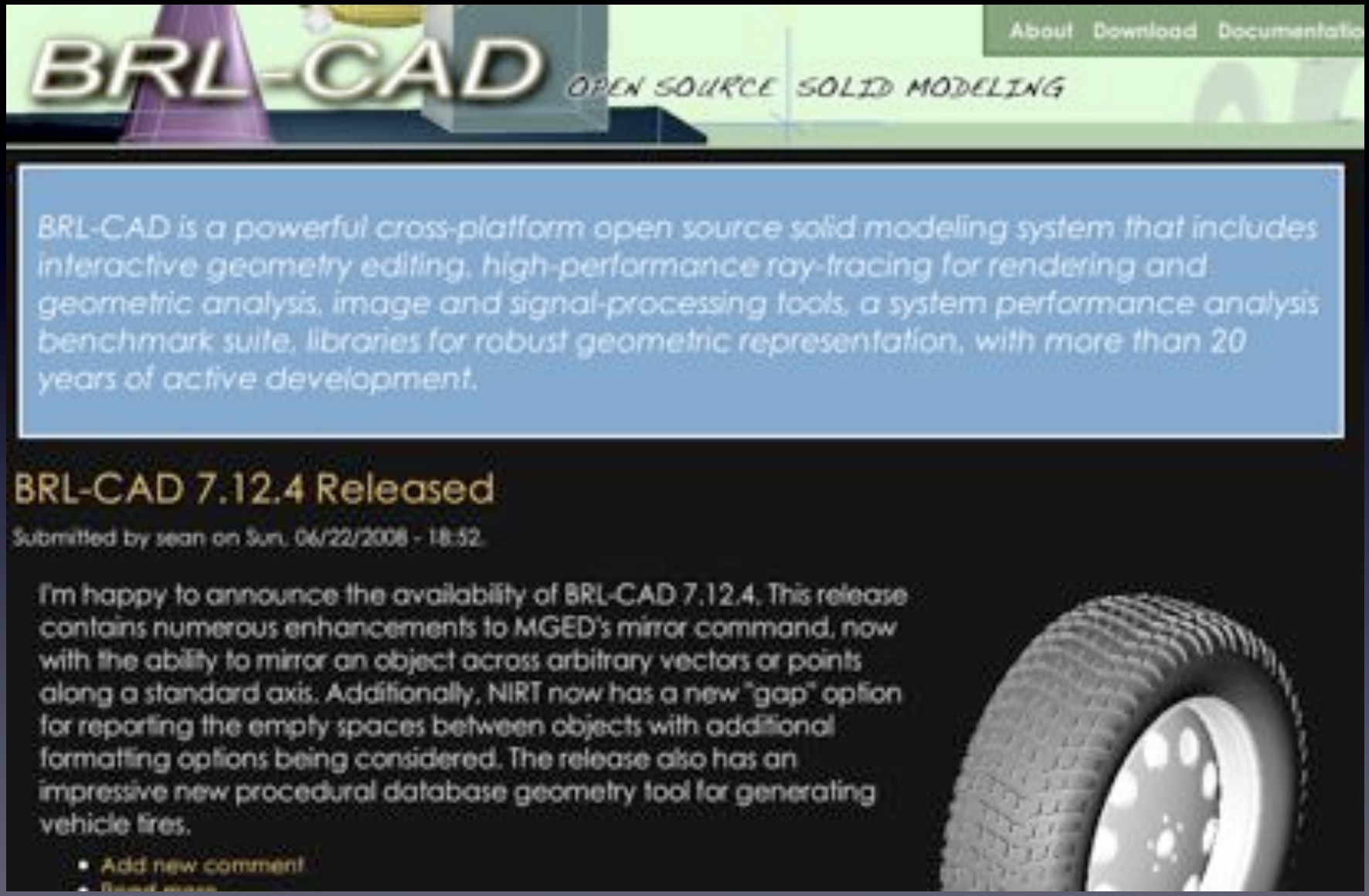
BallForge Flagship Project: Opticks

Opticks is a multiplatform application for processing & viewing remote sensing data. The project is licensed under LGPL to encourage reuse in other projects. You can access the project website at https://opticks.ballforge.net/.

There are many ways you can get involved in this open source community. Feel free to browse the projects. If you see a project you are interested in please download it, use it, and provide feedback. If you are a developer, improve the code and help make the project better. All projects will have contact information and mailing lists you can use to get involved.

Delta-3D (www.delta3d.org) OSS Gaming & Sim. Engine

BRL-CAD (http://brlcad.org/) Army Solid Modeling OSS



Can't **trust** one Company Must **trust** Industry

Tom Sawyer effect:
Get others to do the work for you
Government needs to use Industry to police itself

‘Everything becomes Legacy’

Goal: Transition from
Legacy needs to be close to zero

NSA shows the way to develop secure systems

Posted on 06 October 2008.

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The development of highly secure, low defect software will be dramatically helped by the release of the Tokeneer research project to the open source community by the US National Security Agency (NSA).

The Tokeneer project was commissioned by the NSA from Praxis High Integrity Systems as a demonstrator of high-assurance software engineering. Developed using Praxis' Correctness by Construction (CbyC) methodology it uses the SPARK Ada language and AdaCore's GNAT Pro environment. The project has demonstrated how to meet or exceed Evaluation Assurance Level (EAL) 5 in the Common Criteria thus demonstrating a path towards the highest levels of security assurance.

The unprecedented release of the project into the open source community aims to demonstrate how highly secure software can be developed cost-effectively, improving industrial practice and providing a starting point for teaching and academic research. Originally showcased in a conference paper in 2006, it has the long-term aim of improving the development practices of NSA's contractors. Tokeneer was created as a fixed-price project, taking just 260 person days to create nearly 10,000 lines of high-assurance code, achieving lower development costs than traditional methods per line of code.

http://www.net-security.org/secworld.php?

http://www.acq.osd.mil/jctd/articles/OTDRoadmapFinal.pdf

https://www.softwaretechnews.com/

Unclassified

LargeData JCTD

LD JCTD Using:

- Wide range of OSS applications, tools and operating systems
  - OSS wikis, configuration management, bug tracking, database
  - Geospatial, distributed collaboration tools (ossimPlanet, OpenIB, MPlayer, Lustre, SOUSA, Trac)

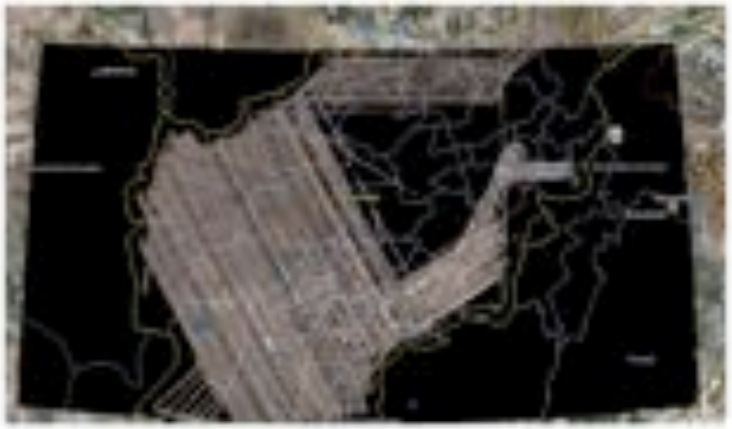
OTD Progress:

- RampantLion data (4.4TB) architecture for Humanitarian Assistance/Disaster Relief operations for Afghan NGOs
- OpenSSL FIPS certification for encryption - real cost savings by Defense Medical Logistics Command, DOE and DISA
- DACS SoftwareTech Issue on Open Source
- USAF OTD Tiger Team Study to change the way AF acquires systems
- DoD Education/Outreach: JCTD course, OTD conferences, www.OpenTechDev.org

Road Ahead:

- Policy - OSD, Navy (DON-CIO), USAF, USA
- OTD & Transition (Book 2)
- New JCTD starts

OTD Participants: OSD-AS&C, OSD-NII, USAF(AQ), NSA, Army (tbd)



OTD Opportunity:

- Agility & Flexibility
  - Faster development
  - Faster deployment: impact during fight
  - Better transition
- Decrease likelihood for vendor lock-in
- Potentially lower costs
- Greater interoperability
- Knowledge capture around software code
- Communities around capabilities

Unclassified

Transnational Information Sharing & Cooperation (TISC) JCTD

TISC is a cooperative endeavor to restructure information management capabilities within the "need to share" context of humanitarian assistance and disaster relief operations

Open Source Software Tools

- Drupal – content management system
- Asterisk – PBX and telephony platform
- Ejabberd – jabber server
- Simile – visualization framework
- Moodle – learning management system
- Zimbra – email server software
- Apache – webserver
- MySQL – database
- Linux – operating system
- Pound – connection manager
- OpenLDAP – ldap software
- Apache SOLR – enterprise search engine

Predictions

- Government entitlements **growing**
- Budget **crunches** are coming
- Spending will be **constrained**
- Adoption of OSS seems to be low hanging fruit
- Government will take a more **active** role in OSS
- **Policies coming out...**

Open Technology Development

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http://opentechdev.org