NASA Open Source Software Release

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Topics

• NASA Software Release Policy
• NASA Open Source Agreement (NOSA)
• Open Source Software (OSS) Development
• Future Enhancements
NASA Software Release Policy
NASA License & Release Program

- NASA recognizes the value of its software
- License commercially valuable software patents and copyrights
  - Non-Exclusive and Exclusive Licenses
  - For Royalties
    - Royalties shared with NASA innovators and Centers
NASA License & Release Program

• In some cases, many not want to (or be able to) license
  – But still want to release
• 1997 - Implemented SW release policy
  – NPD/NPR 2210, Release of NASA Software
• Purpose of Policy
  – Protect NASA and public’s investment in software
  – Maintain and enhance U.S. industry’s competitiveness in the U.S. & international marketplace
Software Release Policy

• Release software in a manner that:
  – Protects Government interests and public’s investment
    • Evaluate commercial potential
    • Establish appropriate IP protection
  – Prevents violation of non-federal owner’s rights
  – Complies with
    • Export control laws
    • IT security requirements
• Each Center has a Software Release Authority (SRA)
Software Release Policy

• Center Office or Project with responsibility for software must:
  – Recommending a desired release category
  – Provide the SRA with the following information
    • Known programmatic restrictions on release
    • Whether the software complies with NASA engineering and assurance requirements
    • If safety-critical software, whether it complies with NASA software safety requirements
    • Technology Readiness Level (TRL)
    • Software documentation, proposed (or available) for release
    • Known export restrictions
    • Whether software includes
      – Open Source or other third party software
      – Embedded computer databases
Software Release Policy

• Release categories:
  – Government Purpose Only Release
  – U.S. General Release
  – U.S. Academic Release
  – Public Release
  – Open Source Release
NASA Open Source Agreement (NOSA)
Open Source Release

• 2003 - NASA researchers requested that NASA consider an open source release option
• Open Source Legal Team formed
• Produced NASA Open Source Agreement (NOSA)
• Received OSI Certification
  – Only Government agency with Certified OS License
• Recently developed a Contributor License Agreements
NASA Open Source Agreement (NOSA)

• NOSA provides:
  – Rights to use, reproduce, distribute, display, and modify the original NASA software
    • without royalty
  – Recipient may create a “Larger Work”
    • combine separate software not covered by NOSA
  – Disclaimer & Waiver of Claims
  – Voluntary tracking requested
NASA Open Source Agreement (NOSA)

- NOSA requires:
  - Distribution of NASA SW under NOSA
  - Distribution of source code
  - Indemnity for liabilities that arise from recipient’s use
NASA Open Source Agreement (NOSA)

• Why Another OS License?
  – Legal Sufficiency to protect the federal government
  • No Copyright for U.S. Government Works
    – Contract v. Copyright
  • Apply U.S. Federal Law
  • Prohibit representations that may be deemed NASA endorsement
  • Contingent liability

• NOSA currently being revised/updated
OS SW Development
Open Source Software Development

• Historically, OSS Development at NASA means:
  — Incorporating external OS SW into NASA SW
  — Developing SW intended for OS distribution
Open Source Software Development

• Center Office or Project responsible for SW development must support incorporation of external OSS

• Responsible Office or Project shall:
  – Determine ramifications of incorporating external OSS during acquisition planning process
  – Consult with Center IP Counsel early in the planning process
    • Compliance with OS license may restrict use
Future Enhancements
Future Enhancements

• Participation in External OS Development Projects
  – Current release policy doesn’t sufficiently address NASA participation in established external OS development projects
  – Geared toward releasing software originally developed by NASA at end of NASA development lifecycle
  – Counter to active open source development philosophy which entails
    • free release as developed
    • unhindered acceptance of software from the community as submitted (after security and other relevant internal reviews)
Future Enhancements

- Policy revisions being considered
- NASA participation in OS development projects may take 3 forms:
  - Pre-existing NASA software
    - Release of software not originally developed for OS release
    - Full NPR review and released under the NOSA or a NOSA compliant license
  - NASA originated open source project
    - Software development for purpose of open source release.
    - Abbreviated Open Source Project Review – export control review, IT security (if meets ITSM requirements), and IP certification
  - External open source project
    - Participation by NASA in existing open source projects
Future Enhancements

- Participation in existing OSS development projects
  - Usually providing incremental revisions to portions of existing open source code
  - Minor code enhancements, coding patches, or bug fixes not subject to the release policy.

- Contributing such revisions to existing OS projects
  - Use of existing OS project license acceptable
  - Dedicate code to public

- If more extensive code subject to release policy
  - Use of project OS license may be approved by IP Counsel
  - Match against list of NOSA compliant licenses