About this JSR

• A framework supporting robust representation and correct handling of quantities.
  – For example, it may be unclear whether a person's mass is expressed in pounds, kilograms, or stones.

• JSR 363 established safe and useful methods for modelling physical quantities.

• Interfaces and abstract classes supporting unit operations including
  – Checking of unit compatibility
  – Expression of measurement in various units
  – Arithmetic operations on units

• Concrete classes implementing standard unit types (base, derived) and unit conversion.
List the significant dates in the history of JSR 363.

- Submitted: March 11, 2014
- Creation approved: April 7, 2014
- EDR finished: January 27, 2015
- Proposed Final Draft: July 19, 2016
- Final Release: September 13, 2016
Publicity

• DevoXX UK 2015
• DevoXX BE 2015
• DevoXX US 2017
Publicity (2)

- JavaOne LA 2015
- JavaOne US 2016
Publicity (3)

- Eclipse Science Unconference at EclipseCon Europe 2016
- Eclipse DemoCamp Darmstadt 2016
Implementation

• Several implementations (apart from the RI) exist:
  – Java SE 8 port:  
    https://github.com/unitsofmeasurement/uom-se
  – Lightweight implementation using Enums:  
    https://github.com/unitsofmeasurement/uom-impl-enum
  – Eclipse UOMo: http://www.eclipse.org/uomo/  
    (CQ for JSR 363 cleared in March 2017)
  – Apache SIS
  – JScience 5: http://www.jscience.org/ (planned)
  – Commercial implementations
Adoption

• We are participating in the Adopt-a-JSR program
• 4 JUGs / their members have joined the EG:
  – Morocco JUG
  – SouJava
  – JUG Chennai
  – JUG Hyderabad
• Especially SouJava / Otavio helped a lot with active contributions to API, RI or the Java SE 8 port.
• PCP/Parfait Lead Nathan Scott is a Contributor on behalf of Red Hat
• Further contributors to extension modules
Development

• We develop the JSR collaboratively through http://unitsofmeasurement.github.io
  – Committers: 4 EG Members (desruisseaux, keilw, leomrlima, otaviojava)
  – 29 GitHub users contribute to wider project (SE port, demos, JSON-, QS integration, etc.)

• The RI is available for public download on https://github.com/unitsofmeasurement/unit-ri
  and on public repositories like JCenter or MavenCentral

• The TCK is available for public download on https://github.com/unitsofmeasurement/unit-tck

• The source-code repository is at https://github.com/unitsofmeasurement
Download Stats

javax.measure:unit-api downloads

Total downloads: 4,267

javax.measure:jsr-275 downloads

Total downloads: 169,396
Java.net Migration

• Public mailing list(s) and/or forum(s)
  – Units-Dev on Google Groups: https://groups.google.com/forum/#!forum/units-dev
  – Units-Users on Google Groups: https://groups.google.com/forum/#!forum/units-users

• We archived java.net JIRA, Experts list and similar artifacts. Collaboration happens via Google Groups, GitHub, Twitter or Stack Overflow in some cases.

• Our document archive with meeting minutes and other materials was moved from java.net to https://bintray.com/unitsofmeasurement/downloads
Use Cases

• Use Cases for JSR 363

Transportation & Logistics

Logistics

Security & Surveillance

Medical & Healthcare

Communication Infrastructure

Internet of Things

Industrial & Energy

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Users

- PCP Parfait
- GeoAPI and projects using it
  - Apache SIS
  - Eclipse LocationTech
  - ...
- Eclipse SmartHome / OpenHAB
- Eclipse Science
- Hibernate Validator 6 (BV 2 RI)
- Apache Tamaya
- Opower (Oracle)
- Several other commercial users
The SI Standard will be revised in June 2018
  – If there is high impact or other requests by the community
    it could be a good occasion for a MR or new JSR
Questions, discussion, next steps
Thank you!