

JPL EXPORT ADMINISTRATION DOCUMENT REVIEW RECORD

Log #: 12101-12120

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Program: ISSM: Ice Sheet System Model

Person Requesting or Initiating Export: Dr. Eric Larour

Date Received: Jun-1-2012

Document Title/Description: ISSM changes from revision 12101 to revision 12120

Release to: <http://issm.ess.uci.edu/svn/issm/issm/trunk> on ISSM svn repository

JPL Intranet: murdo.jpl.nasa.gov/proj/ice/larour/issm-uci/trunk-jpl

Disposition: 6 Does not contain export-controlled information. May be released/disclosed as requested subject to Company guidelines on protection of proprietary information (if applicable).

Comments: see table of changes below.

Reviewed by ISSM Export Transfer Liaison: Dr. Eric Larour **Date:** Jun-1-2012



JPL Export Administration Form TBS June 29, 2011

Disposition:

- 1: Public Domain Information (Ref ITAR Section 120.11)
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- 7: Other (specify)

Change #1 with diff file ISSM-12101-12102.diff:

Function name:

A /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscMatrixToDoubleMatrix.cpp

A /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscVectorToDoubleVector.cpp

M /issm/trunk-jpl/src/c/toolkits/petsc/patches/petscpatches.h

Export determination: 6.

Rationale: Relocation from matlab to petsc patches M /issm/trunk-jpl/configs/config-

macosx64-larour-nopetsc.sh M /issm/trunk-jpl/externalpackages/nose/install-

macosx64sh M /issm/trunk-jpl/externalpackages/scipy/install-macosx64.sh M

/issm/trunk-jpl/m4/issm_options.m4 M /issm/trunk-jpl/src/Makefile.am M /issm/trunk-

jpl/src/c/Container/Constraints.cpp M /issm/trunk-jpl/src/c/Container/Elements.cpp

M /issm/trunk-jpl/src/c/Container/Loads.cpp M /issm/trunk-jpl/src/c/Container/Nodes.cpp

M /issm/trunk-jpl/src/c/Container/Vertices.cpp M /issm/trunk-jpl/src/c/Makefile.am

D /issm/trunk-jpl/src/c/matlab/io/PetscMatrixToDoubleMatrix.cpp D /issm/trunk-

jpl/src/c/matlab/io/PetscVectorToDoubleVector.cpp M /issm/trunk-jpl/src/c/matlab/io/WriteMatlabData.c

M /issm/trunk-jpl/src/c/matlab/io/matlabio.h M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/RiftCon

M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/ThermalConstraintsState.cpp

M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/ThermalIsPresent.cpp M

/issm/trunk-jpl/src/c/modules/DragCoefficientAbsGradientx/DragCoefficientAbsGradientx.cpp

M /issm/trunk-jpl/src/c/modules/ElementResponsex/ElementResponsex.cpp M

/issm/trunk-jpl/src/c/modules/GroundinglineMigrationx/GroundinglineMigrationx.cpp

M /issm/trunk-jpl/src/c/modules/IceVolumex/IceVolumex.cpp M /issm/trunk-

jpl/src/c/modules/InputConvergecx/InputConvergecx.cpp M /issm/trunk-

jpl/src/c/modules/MassFluxx/MassFluxx.cpp M /issm/trunk-jpl/src/c/modules/MaxAbsVxx/MaxAbsVxx.c

M /issm/trunk-jpl/src/c/modules/MaxAbsVyx/MaxAbsVyx.cpp M /issm/trunk-

jpl/src/c/modules/MaxAbsVzx/MaxAbsVzx.cpp M /issm/trunk-jpl/src/c/modules/MaxVelx/MaxVelx.cpp

M /issm/trunk-jpl/src/c/modules/MaxVxx/MaxVxx.cpp M /issm/trunk-jpl/src/c/modules/MaxVyx/MaxVy

M /issm/trunk-jpl/src/c/modules/MaxVzx/MaxVzx.cpp M /issm/trunk-jpl/src/c/modules/MeshPartitionx/M

M /issm/trunk-jpl/src/c/modules/MinVelx/MinVelx.cpp M /issm/trunk-jpl/src/c/modules/MinVxx/MinVxx

M /issm/trunk-jpl/src/c/modules/MinVyx/MinVyx.cpp M /issm/trunk-jpl/src/c/modules/MinVzx/MinVzx.c

M /issm/trunk-jpl/src/c/modules/NodalValuex/NodalValuex.cpp M /issm/trunk-

jpl/src/c/modules/ParsePetscOptionsx/ParsePetscOptionsx.cpp M /issm/trunk-

jpl/src/c/modules/RheologyBbarAbsGradientx/RheologyBbarAbsGradientx.cpp

M /issm/trunk-jpl/src/c/modules/SurfaceAbsVelMisfitx/SurfaceAbsVelMisfitx.cpp

M /issm/trunk-jpl/src/c/modules/SurfaceAreax/SurfaceAreax.cpp M /issm/trunk-jpl/src/c/modules/SurfaceAverageVelMisfitx/SurfaceAverageVelMisfitx.cpp M /issm/trunk-jpl/src/c/modules/SurfaceLogVelMisfitx/SurfaceLogVelMisfitx.cpp M /issm/trunk-jpl/src/c/modules/SurfaceLogVxVyMisfitx/SurfaceLogVxVyMisfitx.cpp M /issm/trunk-jpl/src/c/modules/SurfaceRelVelMisfitx/SurfaceRelVelMisfitx.cpp M /issm/trunk-jpl/src/c/modules/ThicknessAbsGradientx/ThicknessAbsGradientx.cpp M /issm/trunk-jpl/src/c/modules/ThicknessAbsMisfitx/ThicknessAbsMisfitx.cpp M /issm/trunk-jpl/src/c/modules/TimeAdaptx/TimeAdaptx.cpp M /issm/trunk-jpl/src/c/objects/Bamg/Metric.h M /issm/trunk-jpl/src/c/objects/IoModel.cpp M /issm/trunk-jpl/src/c/objects/Patch.cpp M /issm/trunk-jpl/src/c/solutions/issm.cpp M /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscMatrixToDoubleMatrix.cpp M /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscVectorToDoubleVector.cpp M /issm/trunk-jpl/src/c/toolkits/toolkits.h A /issm/trunk-jpl/src/m/model/mesh/triangle.py M /issm/trunk-jpl/startup.py M /issm/trunk-jpl/test/NightlyRun/test101.py Stripped out the following layers: METIS: if not running with MPI, do not partition! MPI: can now run without PETSC and MPI, just using the gsl matrix format. PETSC and MPI: idem. Can not run MPI and PETSC separately.

Change #2 with diff file ISSM-12102-12103.diff:

Function name:

M /issm/trunk-jpl/configs/config-macosx64-larour-nopetsc.sh M /issm/trunk-jpl/externalpackages/nose/install-macosx64sh M /issm/trunk-jpl/externalpackages/scipy/install-macosx64.sh M /issm/trunk-jpl/m4/issm_options.m4 M /issm/trunk-jpl/src/Makefile.am M /issm/trunk-jpl/src/c/Container/Constraints.cpp M /issm/trunk-jpl/src/c/Container/Elements.cpp M /issm/trunk-jpl/src/c/Container/Loads.cpp M /issm/trunk-jpl/src/c/Container/Nodes.cpp M /issm/trunk-jpl/src/c/Container/Vertices.cpp M /issm/trunk-jpl/src/c/Makefile.am D /issm/trunk-jpl/src/c/matlab/io/PetscMatrixToDoubleMatrix.cpp D /issm/trunk-jpl/src/c/matlab/io/PetscVectorToDoubleVector.cpp M /issm/trunk-jpl/src/c/matlab/io/WriteMatlabData.c M /issm/trunk-jpl/src/c/matlab/io/matlabio.h M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/RiftCon M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/ThermalConstraintsState.cpp M /issm/trunk-jpl/src/c/modules/ConstraintsStatex/ThermalIsPresent.cpp M /issm/trunk-jpl/src/c/modules/DragCoefficientAbsGradientx/DragCoefficientAbsGradientx.cpp M /issm/trunk-jpl/src/c/modules/ElementResponsex/ElementResponsex.cpp M /issm/trunk-jpl/src/c/modules/GroundinglineMigrationx/GroundinglineMigrationx.cpp M /issm/trunk-jpl/src/c/modules/IceVolumex/IceVolumex.cpp M /issm/trunk-jpl/src/c/modules/InputConvergecx/InputConvergecx.cpp M /issm/trunk-jpl/src/c/modules/MassFluxx/MassFluxx.cpp M /issm/trunk-jpl/src/c/modules/MaxAbsVxx/MaxAbsVxx.c M /issm/trunk-jpl/src/c/modules/MaxAbsVyx/MaxAbsVyx.cpp M /issm/trunk-jpl/src/c/modules/MaxAbsVzx/MaxAbsVzx.cpp M /issm/trunk-jpl/src/c/modules/MaxVelx/MaxVelx.cpp M /issm/trunk-jpl/src/c/modules/MaxVxx/MaxVxx.cpp M /issm/trunk-jpl/src/c/modules/MaxVyx/MaxVyx M /issm/trunk-jpl/src/c/modules/MaxVzx/MaxVzx.cpp M /issm/trunk-jpl/src/c/modules/MeshPartitionx/M M /issm/trunk-jpl/src/c/modules/MinVelx/MinVelx.cpp M /issm/trunk-jpl/src/c/modules/MinVxx/MinVxx M /issm/trunk-jpl/src/c/modules/MinVyx/MinVyx.cpp M /issm/trunk-jpl/src/c/modules/MinVzx/MinVzx.c M /issm/trunk-jpl/src/c/modules/NodalValuex/NodalValuex.cpp M /issm/trunk-jpl/src/c/modules/ParsePetscOptionsx/ParsePetscOptionsx.cpp M /issm/trunk-jpl/src/c/modules/RheologyBbarAbsGradientx/RheologyBbarAbsGradientx.cpp

M /issm/trunk-jpl/src/c/modules/SurfaceAbsVelMisfitx/SurfaceAbsVelMisfitx.cpp
 M /issm/trunk-jpl/src/c/modules/SurfaceAreax/SurfaceAreax.cpp M /issm/trunk-jpl/src/c/modules/SurfaceAverageVelMisfitx/SurfaceAverageVelMisfitx.cpp M /issm/trunk-jpl/src/c/modules/SurfaceLogVelMisfitx/SurfaceLogVelMisfitx.cpp
 M /issm/trunk-jpl/src/c/modules/SurfaceLogVxVyMisfitx/SurfaceLogVxVyMisfitx.cpp
 M /issm/trunk-jpl/src/c/modules/SurfaceRelVelMisfitx/SurfaceRelVelMisfitx.cpp
 M /issm/trunk-jpl/src/c/modules/ThicknessAbsGradientx/ThicknessAbsGradientx.cpp
 M /issm/trunk-jpl/src/c/modules/ThicknessAbsMisfitx/ThicknessAbsMisfitx.cpp
 M /issm/trunk-jpl/src/c/modules/TimeAdaptx/TimeAdaptx.cpp M /issm/trunk-jpl/src/c/objects/Bamg/Metric.h M /issm/trunk-jpl/src/c/objects/IoModel.cpp
 M /issm/trunk-jpl/src/c/objects/Patch.cpp M /issm/trunk-jpl/src/c/solutions/issm.cpp
 M /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscMatrixToDoubleMatrix.cpp
 M /issm/trunk-jpl/src/c/toolkits/petsc/patches/PetscVectorToDoubleVector.cpp
 M /issm/trunk-jpl/src/c/toolkits/toolkits.h A /issm/trunk-jpl/src/m/model/mesh/triangle.py
 M /issm/trunk-jpl/startup.py M /issm/trunk-jpl/test/NightlyRun/test101.py
 Export determination: 6.
 Rationale: Stripped out the following layers: METIS: if not running with MPI, do not partition! MPI: can now run without PETSC and MPI, just using the gsl matrix format. PETSC and MPI: idem. Can not run MPI and PETSC separately. M /issm/trunk-jpl/configs/config-arm.sh Arm processor configuration

Change #3 with diff file ISSM-12103-12104.diff:

Function name:

M /issm/trunk-jpl/configs/config-arm.sh

Export determination: 6.

Rationale: Arm processor configuration M /issm/trunk-jpl/src/c/objects/Numerics/Matrix.cpp
 Create dense matrix if sparsity=1

Change #4 with diff file ISSM-12104-12105.diff:

Function name:

M /issm/trunk-jpl/src/c/objects/Numerics/Matrix.cpp

Export determination: 6.

Rationale: Create dense matrix if sparsity=1 M /issm/trunk-jpl/src/c/objects/Numerics/Matrix.cpp
 oops, wrong file

Change #5 with diff file ISSM-12105-12106.diff:

Function name:

M /issm/trunk-jpl/src/c/objects/Numerics/Matrix.cpp

Export determination: 6.

Rationale: oops, wrong file M /issm/trunk-jpl/src/c/toolkits/petsc/patches/NewMat.cpp
 Create dense matrix if sparsity=1

Change #6 with diff file ISSM-12106-12107.diff:

Function name:

M /issm/trunk-jpl/src/c/toolkits/petsc/patches/NewMat.cpp

Export determination: 6.

Rationale: Create dense matrix if sparsity=1 M /issm/trunk-jpl/externalpackages/petsc/install-dev-linux64.sh Added spai install

Change #7 with diff file ISSM-12107-12108.diff:

Function name:

M /issm/trunk-jpl/externalpackages/petsc/install-dev-linux64.sh

Export determination: 6.

Rationale: Added spai install M /issm/trunk-jpl/src/c/Container/Nodes.cpp

Bug in MPI_Gather

Change #8 with diff file ISSM-12108-12109.diff:

Function name:

M /issm/trunk-jpl/src/c/Container/Nodes.cpp

Export determination: 6.

Rationale: Bug in MPI_Gather M /issm/trunk-jpl/src/c/Container/Nodes.cpp

Fixed bug introduced while stripping MPI

Change #9 with diff file ISSM-12109-12110.diff:

Function name:

M /issm/trunk-jpl/src/c/Container/Nodes.cpp

Export determination: 6.

Rationale: Fixed bug introduced while stripping MPI M /issm/trunk-jpl/test/NightlyRun/test101.py
triangle now working completely in python

Change #10 with diff file ISSM-12110-12111.diff:

Function name:

M /issm/trunk-jpl/test/NightlyRun/test101.py

Export determination: 6.

Rationale: triangle now working completely in python D /issm/trunk-jpl/test/NightlyRun/test101.py
A /issm/trunk-jpl/test/NightlyRun/test102.py (from /issm/trunk-jpl/test/NightlyRun/test101.py:12110)
Moving to 102

Change #11 with diff file ISSM-12111-12112.diff:

Function name:

D /issm/trunk-jpl/test/NightlyRun/test101.py A /issm/trunk-jpl/test/NightlyRun/test102.py
(from /issm/trunk-jpl/test/NightlyRun/test101.py:12110)

Export determination: 6.

Rationale: Moving to 102 M /issm/trunk-jpl/configs/config-macosx64-larour-nopetsc.sh M /issm/trunk-jpl/src/c/python/io/FetchPythonData.cpp M /issm/trunk-jpl/src/c/python/io/WritePythonData.cpp M /issm/trunk-jpl/src/c/python/io/pythonio.h
M /issm/trunk-jpl/src/m/model/mesh M /issm/trunk-jpl/src/m/model/mesh/triangle.py
A /issm/trunk-jpl/src/m/model/setmask.py A /issm/trunk-jpl/src/m/Utils/Geometry/FlagElements.py
M /issm/trunk-jpl/src/modules/ElementConnectivity/ElementConnectivity.cpp
M /issm/trunk-jpl/src/modules/ElementConnectivity/ElementConnectivity.h M /issm/trunk-jpl/src/modules/NodeConnectivity/NodeConnectivity.cpp M /issm/trunk-jpl/src/modules/NodeConnectivity/NodeConnectivity.h M /issm/trunk-jpl/src/modules/TriMesh/TriMesh.cpp

M /issm/trunk-jpl/src/modules/python/Makefile.am M /issm/trunk-jpl/startup.py
M /issm/trunk-jpl/test/NightlyRun/test102.py Finished python version of set-
mask.py and FlagElements.py Also finished triangle.py, with addition of 2 python
modules NodeConnectivity and ElementConnectivity.

Change #12 with diff file ISSM-12112-12113.diff:

Function name:

M /issm/trunk-jpl/configs/config-macosx64-larour-nopetsc.sh M /issm/trunk-
jpl/src/c/python/io/FetchPythonData.cpp M /issm/trunk-jpl/src/c/python/io/WritePythonData.cpp
M /issm/trunk-jpl/src/c/python/io/pythonio.h M /issm/trunk-jpl/src/m/model/mesh
M /issm/trunk-jpl/src/m/model/mesh/triangle.py A /issm/trunk-jpl/src/m/model/setmask.py
A /issm/trunk-jpl/src/m/Utils/Geometry/FlagElements.py M /issm/trunk-jpl/src/modules/ElementConnectivity
M /issm/trunk-jpl/src/modules/ElementConnectivity/ElementConnectivity.h M
/issm/trunk-jpl/src/modules/NodeConnectivity/NodeConnectivity.cpp M /issm/trunk-
jpl/src/modules/NodeConnectivity/NodeConnectivity.h M /issm/trunk-jpl/src/modules/TriMesh/TriMesh.cp
M /issm/trunk-jpl/src/modules/python/Makefile.am M /issm/trunk-jpl/startup.py
M /issm/trunk-jpl/test/NightlyRun/test102.py

Export determination: 6.

Rationale: Finished python version of setmask.py and FlagElements.py Also fin-
ished triangle.py, with addition of 2 python modules NodeConnectivity and El-
ementConnectivity. M /issm/trunk-jpl/src/m/classes/model.py A /issm/trunk-
jpl/src/m/model/addnote.py A /issm/trunk-jpl/src/m/model/parameterization/parameterize.py
M /issm/trunk-jpl/test/NightlyRun/test102.py Implemented parameterize rou-
tine in python

Change #13 with diff file ISSM-12113-12114.diff:

Function name:

M /issm/trunk-jpl/src/m/classes/model.py A /issm/trunk-jpl/src/m/model/addnote.py
A /issm/trunk-jpl/src/m/model/parameterization/parameterize.py M /issm/trunk-
jpl/test/NightlyRun/test102.py

Export determination: 6.

Rationale: Implemented parameterize routine in python

Change #14 with diff file ISSM-12114-12115.diff:

Function name:

A /issm/trunk-jpl/externalpackages/gsl/install-android-4.0.sh M /issm/trunk-
jpl/externalpackages/triangle/configs/android/android-4.0/configure.make M /issm/trunk-
jpl/m4/issm_options.m4

Export determination: 6.

Rationale: Created the install script for GSL to cross-compile for arm-linux-
android and made minor modifications to other scripts.

Change #15 with diff file ISSM-12115-12116.diff:

Function name:

A /issm/trunk-jpl/externalpackages/gsl/install-android-4.0.sh M /issm/trunk-
jpl/externalpackages/triangle/configs/android/android-4.0/configure.make M /issm/trunk-

jpl/m4/issm_options.m4

Export determination: 6.

Rationale: Created the install script for GSL to cross-compile for arm-linux-android and made minor modifications to other scripts. M /issm/trunk-jpl/src/m/model/mesh/triangle.py
Indexing bug

Change #16 with diff file ISSM-12116-12117.diff:

Function name:

M /issm/trunk-jpl/src/m/model/mesh/triangle.py

Export determination: 6.

Rationale: Indexing bug M /issm/trunk-jpl/src/m/classes/materials.py Added defaults for materials class

Change #17 with diff file ISSM-12117-12118.diff:

Function name:

M /issm/trunk-jpl/src/m/classes/materials.py

Export determination: 6.

Rationale: Added defaults for materials class M /issm/trunk-jpl/src/modules/InterpFromMeshToMesh2d/InterpFromMeshToMesh2d.h

M /issm/trunk-jpl/src/modules/InterpFromMeshToMesh2d/InterpFromMeshToMesh2d.h

M /issm/trunk-jpl/src/modules/python/Makefile.am Adapted InterpFromMeshToMesh2d to python

Change #18 with diff file ISSM-12118-12119.diff:

Function name:

M /issm/trunk-jpl/src/modules/InterpFromMeshToMesh2d/InterpFromMeshToMesh2d.cpp

M /issm/trunk-jpl/src/modules/InterpFromMeshToMesh2d/InterpFromMeshToMesh2d.h

M /issm/trunk-jpl/src/modules/python/Makefile.am

Export determination: 6.

Rationale: Adapted InterpFromMeshToMesh2d to python M /issm/trunk-jpl/src/c/python/include/python_macros.h
Added nrhs as input argument for all python modules to access

Change #19 with diff file ISSM-12119-12120.diff:

Function name:

M /issm/trunk-jpl/src/c/python/include/python_macros.h

Export determination: 6.

Rationale: Added nrhs as input argument for all python modules to access M /issm/trunk-jpl/src/c/python/io/FetchPythonData.cpp M /issm/trunk-jpl/src/c/python/io/pythonio.h
Added fetch data capability for double* vector