ANUGA What's New

Release 1.3.1

Nariman Habili

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Geoscience Australia
Email: anuga@ga.gov.au

ANUGA release information

This document outlines major bug fixes and new functionality added to ANUGA between releases. These lists are not comprehensive and we refer to the TRAC system for a complete audit trail of changes made to ANUGA.

- Timeline of all changes to the code base: https://datamining.anu.edu.au/anuga/timeline

- Changesets between two releases: To see all changes between subversion versions 4669 and 4733, for example, visit:

    – `https://datamining.anu.edu.au/anuga/changeset/4669` through to
    – `https://datamining.anu.edu.au/anuga/changeset/4733`

The release names take the form

      `AA-BB.CC.DD.EXT`

where

- `AA` is the name of the anuga component, e.g. `anuga`, `anuga_viewer`, `anuga_installation_-guide` or `anuga_user_manual`

- `BB` is the major revision number. The major revision number is unlikely to change very often unless the code has undergone a major change.

- `CC` is the minor revision number. This number will increase when the code undergoes major bug fixes, changes to the interface, optimisation and the addition of minor features.

- `DD` is the minor revision number. This number will increase when the code undergoes minor bug fixes.

- `EXT` is the file name extension `tgz`[1] used for source code or `pdf` used for documentation.

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[1]Internet explorer has the habit of renaming the .tgz files to .gz - the remedy is to rename them back or use another browser such as Firefox.

Release notes

This chapter list main developments between releases. Small bug fixes, refactoring, documentation updates, style fixes are generally not reported here. Refer to the Subversion log (https://datamining.anu.edu.au/anuga/timeline) and closed tickets https://datamining.anu.edu.au/anuga/report/10) for all changes in ANUGA.

2.1 Bleeding Edge

Work on parallel ANUGA, Kinematic Viscosity, 1-D pipeflows and wind/pressure forcing terms. There is also activity in the area of viewers and installers.

2.2 Release Name: anuga-1.2.0, Date: July 2010

Breaks code compatibility with older ANUGA versions. Please see the ANUGA wiki for migration instructions. Simplified API, with more logical module locations and names. Support for internal boundaries and holes in meshes. Support for user-specified breaklines. Speed optimisations - fitting is around 25 percent faster. Various bug fixes - see trac. Note the new versioning system.

2.3 Release Name: anuga-1.1beta_7607, Date: 12 January 2010

Discarded obsolete variable 'z' in sww files. This commits ANUGA to the new viewer: `http://www.ausposdevelop.com.au/trac/anuga_viewer`. Small optimisations and cleaning Intoduced one-click Windows installer Updates on the parallel code.

2.4 Release Name: anuga-1.1beta_7472, Date: 3 September 2009

Ability to store any quantity in the sww file either as static or time dependent. This allows for example storage of variable bed elevation and/or friction. See manual for details on set_quantities_to_be_stored.

2.5 Release Name: anuga-1.1beta_7315, Date: 20 July 2009

ANUGA updated to work with Python 2.6 Reference to new viewer in manual.

2.6 Release Name: anuga-1.1beta_7302, Date: 6 July 2009

This is the first release of ANUGA based on the package Python-numpy. The reason for this upgrade is that the old package Numeric is no longer supported and doesn't work for some systems. See the installation guide for

details regarding the new dependencies.

2.7   Release Name: anuga-1.0beta_7163, Date: 9 June 2009

THIS IS THE LAST OFFICIAL RELEASE OF ANUGA BASED ON THE PYTHON NUMERIC PACKAGE.

- Several optimisations. ANUGA now runs at least 10-15% faster overall. See changesets 7143, 7136, 7105, 7034, 6840, 6737, 6703.

- Culverts based on the Boyd method have been refactored and test suite added thanks to Rudy van Drie and Petar Milevski.

- Added a special purpose boundary (AWI boundary) provide by Nils Goseberg.

- Cleanup Cairns demo and introduced example of new method add_quantity.

2.8   Release Name: anuga-1.0beta_6838, Date: 19 April 2009

- Implemented availability of average energy as well as flow through cross-section at run-time (ticket:295)

- Stored permutation from urs2sts in STS file (ticket:298)

- Equipped File_boundary and Field_boundary with default boundary conditions to allow modelling beyond time interval (ticket:293)

- Allowed fitting to reuse ANUGA mesh saving memory and time.

- Started new module anuga.interface containing common functions. In particular the new function create_domain_from_regions (ticket:308 and changeset:6190) which can replace the old call to create_mesh_from_regions followed by Domain. This not only simplifies domain creation, it also makes caching of this process water proof. This function has not yet been documented in the user manual.

- Made evolve loop about 5% faster due to optimisations in changeset:6703 and changeset:6737.

- Fixed tests that only failed on Windows.

2.9   Release Name: anuga-1.0beta_5638, Date: 11 August 2008

- Better diagnostics for timestepping.

- Implemented tracking of IP for data files bundled with ANUGA to ensure that all are legally OK to distribute.

- Improved logging of model runs (screen_catcher and copy_code_files).

- Refactored graphing of timeseries into extraction and plotting (see sww2timeseries and sww2cvs_gauges).

- Improved performance and memory management in generate mesh and least squares fitting.

- Simplified Quantity data structure.

- Added more validation examples.

- Function for automatically determining optimal smoothing parameter through cross validation (`get_flow_through_cross_section`, p 57 in the user manual)

- Implemented better second order approximation through the option to use edge limiters along with second order Runge-Kutta timestepping. This provides better accuracy in some cases (e.g. waves in deep water over long distances)

- Made tight_slope_limiters the default.

- Retired obsolete parameter beta_h

- Added the Okada tsunami source model as an optional initial condition in ANUGA

- Upgraded ANUGA to work with Python 2.5

- New fileboundary (using NetCDF format with extension .sts) coupling for timeseries on a list of points.

- Added new forcing terms for flood modelling capability: Rainfall, Inflow, Culverts, ... (See p 51-53)

2.10   Release Name: anuga-1.0beta_4824, Date: 15 Nov 2007

- Removal of obsolete Python code where (faster) C code exists.

- Several updates in the documentation in response to postings.

- Improved installation and compilation procedure.

- Addressed excessive memory use in fitting (currently optional as it appears somewhat slower)

2.11   Release Name: anuga-1.0beta_4733, Date 12 Sep 2007

- A number of optimisations making the evolution part of ANUGA about 40% faster. See `https://datamining.anu.edu.au/anuga/ticket/135` for details. The optimisations are

  - Dry cell exclusion from flux calculations and linear reconstruction of triangles. This optimisation will be most effective in domains with large dry areas.
  - Separation of functions into gateways and computational routines
  - Utilisation of static work arrays
  - A large number of minor optimisations

- Obsolete code was cleared out.

2.12   Release Name: anuga-1.0beta_4669, Date 17 Aug 2007

- Improved speed in set_quantity

- deprecated xya file format

- general maintenance

2.13   Release Name: anuga-1.0beta_4530, 4 June 2007

2.14   Release Name: anuga-1.0beta_4492, 25 May 2007

2.15   Release Name: anuga_1.0beta_4106, 20 Dec 2006

- First public release of ANUGA - Hydrodynamic Modelling.

Version 1.0beta is the first version for general use. It is considered as a beta release as we expect feedback and suggestions for improvement by the community.

The minor release number (4106) is the revision number from Subversion and uniquely defines the exact version of ANUGA.