

# The AVATS and SUMOVER Projects: The UCL media tools continue

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## Overview

- **SUMOVER project**
- **AVATS project**
- **Current status**
- **Plans**
- **Future...**

## SUMOVER Project

- **Funded by JISC: Aug 2005 - Dec 2007**
- **Created common code base**
  - <http://mediatools.cs.ucl.ac.uk/>
    - *Subversion* and *Trac* based management system
- **Organised two project Workshops**
  - **Community building and dissemination**
- **Provision for support and bug fixing of tools**
  - **With help from others: ANL, AGSC, Glasgow University, University Queensland, NCHC Taiwan, Australian National University, New Mexico State University**
- **Added a number of new features to the tools**

## VIC – Feature set for AG release

- **New codecs {NCHC}**
  - MPEG4 compliant with RFC
  - H.264 compliant with RFC 3984 {UCL}
- **Advanced rendering {NCHC}**
  - Full-Screen mode, Video window scaling in software
  - X11 XVideo - hardware scaling/colourspace conversion
  - Windows DirectDraw rendering {ANL}
- **Windows Direct Show Grabber {Mark Petrovick}**
- **Image overlay/logo sending functionality**
- **Source-Specific Multicast (SSM) support**
- **MacOSX**
  - Aqua Tcl/Tk support {NCHC}
  - Mac video capture support {MASH}
- **AccessGrid features {ANL, UCL}**
  - Autoplace controls
  - Optional window menus/border
  - Site identifier signalling

## **RAT – Feature set for AG release**

- **New look GUI: Dynamic display of Address/port/ttl**
- **Dynamic address/port re-binding**
  - Useful in conjunction with AG for faster room change
- **Security padlock icon**
  - Indicates when crypto enabled
- **Fixes to ALSA driver and updated mixer controls**
- **AccessGrid Features {ANL, UCL}**
  - Per user gain control
  - Site identifier signalling
  - Other smaller bugs and patches
- **MacOSX {UCL}**
  - Aqua Tcl/Tk support
  - Core Audio driver fixed for Intel

## Common library

- **Latest fixes**
  - MBUS sequence numbers wrapping
  - Encrypted stream robustness
  - Memory debugging fixed
- **Added ANL Network helper functions**
  - To pick the right Ethernet interface if multiple available

## AVATS Project

- **OMII-UK funded Jan 2008 – Dec 2008**
  - UCL and Manchester University
- **Provide baseline support for VIC and RAT**
  - Continued support on new OS's
- **Support code management systems.**
- **Include contributions by external projects**
- **Stability enhancements to the tools**
  - Establishment of automated testing systems
- **Enhance documentation.**

## **AVATS description continued**

- **Provide for inter-working with IOCOM/inSORS**
  - Specifically with IG2 H.264 streams
- **Maintain close ties with the AGSC**
  - Ensure project outputs are effectively disseminated and included in related developments such as PAG
- **Explore avenues for longer-term sustainability of these activities**
- **Do four releases of the tools**



## AVATS progress

- **IOCOM/IG2 and VIC inter-working**
  - Beta release of VIC decoding IG2’s “default (non-standard)” and “standard” H.264 streams.
    - IG2 already decodes VIC H.264 streams
    - VIC currently uses slightly modified ffmpeg H.264 codec
- **VIC**
  - Tcl/tk8.5 support (UQ), Video menu, H.261 fixes
- **RAT**
  - Vista/HD audio support, Encrypted stream bug fix, fixed Ctrl-Z crash, Informed exit with Firewall/VPN problems

## AVATS progress continued

- **Google Summer of Code 2008 student**
  - Adding congestion control
    - TCP Friendly Window Control Protocol (TFWC) cf. TFRC
- **Documentation updates**
  - Manual pages, and Changes updated
  - Developed Trac man page plugin
- **Debug improvements**
  - Changes to common for debug to file
  - Investigating crash reporting
    - Google breakpad, Ubuntu apport
- **Investigation begun for auto testing**
  - Mozilla Tinderbox, XORP.org build system

## Plan for the next 6 months (Dec '08)

- **Continue to stabilise common code base**
  - We need your feedback, use the media tools Wiki/maillinglists
  - Investigate issues with newer OS/API's
  - Update and maintain Trac/Subversion systems
- **Support AG community as far as possible**
  - Fix issues in conjunction with ANL and ag-tech
- **Follow through with Google Summer of Code project**
- **Continue collaboration with external developers**
  - Many thanks to: Tom Uram, Doug Kosovic (UoQueensland), Colin Perkins (Glasgow), Brook Milligan (NMSU), and others
- **Improve documentation and debug facilities**
- **Deploy automatic build and test systems**
- **Explore new avenues for funding**

## Future

- **Continued funding is not assured**
  - Despite clear need by AccessGrid community
- **Other possible options**
  - Open source foundation model?
    - Needs members/stakeholders to commit some funds...any takers?
  - AccessGrid maintained?
    - Minimal effort available
  - Side effort on other project?
    - Only minor effort possible
  - Background effort?
    - Probably ineffective
- **Let us know your ideas/suggestions!**