

## MEDIASPACE 9 GENERATIVE

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## Autoshop™ v1.0.0. Written by Adrian Ward and Autoshop™.

## GM Manifesto by

## Auto-Illustrator™. Written by Adrian Ward and Auto-Illustrator™.

## The STI Consortium.

## The Spectator Project.

Welcome to MEDIASPACE 9. This edition explores and documents some digital production activities, which fall happily into the emerging category of 'generative' and 'auto-generative' art. Opening with two of the most innovative generative software products available on the web today, Signwave™ AutoShop™ and Signwave™ Auto-Illustrator, this edition of MEDIASPACE maps out cross disciplinary domains [computer imaging/DTP, digital audio, artificial intelligence - satellite imaging, narrative/telematic writing/performance] where generative activity is defining key cultural shifts in terms of the production and consumption of digital work. The GM Manifesto, for instance, highlights the impact generative media is having on the music industry [a warning for all media production industries] and places the futures of digital audio clearly in the realm of algorithms and data. A place where, in many ways, the performers and the audience are peripheral...

The STI Project engages with a new dimension unveiled by autonomous digital activity and exposes the 'image' as the primary reason for our cultural aphasia. There was a time when the integrity of an image viewed through a lens was deemed illusory, now our understanding of the material world is dependant on images viewed through technology, images of; the end of the Universe, faces on Mars, Earth, foetuses, bacteria, atoms, and even consciousness. In the search for the 'image' as truth the precarious and ominous assumptions of alchemists, phrenologists and eugenicists are being replayed, all negligent of the fact that the image is a symptom of a complex process...

...and the Spectator Project engages with the impact on our ability, a symptom of our Twenty First Century hyper-linked minds, to operate across a range of media spaces. The construction of these media spaces/places creates stress on the traditional framing and articulation of the narrative form. A word that no longer seems to be able to contain, adequately explain or incorporate synchronous and asynchronous multi-location interactivity within a single framework...

...all of these activities can be found on the various websites indicated in each of the sections, and of course linked from the MEDIASPACE website at [www.CaiA-STAR.net/projects/MEDIASPACE](http://www.CaiA-STAR.net/projects/MEDIASPACE)

BTW...this is the last edition of MEDIASPACE to appear as part of Digital Creativity. MEDIASPACE will still exist on the web and for the occasional satellite/web cast. MEDIASPACE is being consumed by STAR New Media Publishing activities from within the Institute for Digital Art and Technology at the University of Plymouth. My thanks to everyone who has helped assemble these and past pages...and, if you have been, thank you for watching.

Mike Phillips, February 2001: [mikep@soc.plym.ac.uk](mailto:mikep@soc.plym.ac.uk)

# LOW I DREW ONE OF MY PICTURES [1]



Adrian Ward BSc, Sidestream, London

email : adri

end.m

... appears in its original form in "Economia" (Autoshop signwave.co.uk) - written and presented at the Conference in Milan, Italy recently. The newer essay, entitled "The Authors" [2] is at <http://www.sidestream.org/ga99>

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## Signwave™ Autoshop™ 1.0 v1.0.0

Written by Adrian Ward. Contains portions from: REAL Software, Inc.

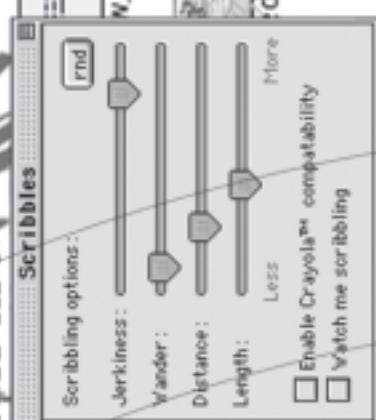
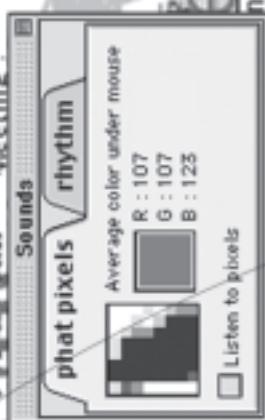
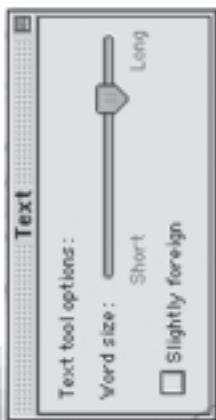
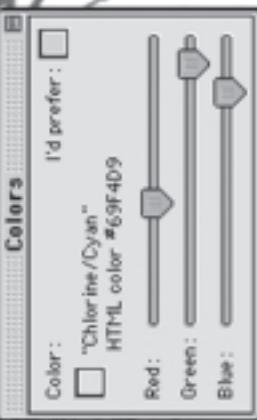
RBCColorPicker plugin © Copyright 1998 Alex Kuznetsov.

GrabNIndex68k plugin © Copyright 1998 Steve Schacht.

GatherPix/FAT plugin © Copyright 1998 RELOADON interactive visual design.

© Copyright 1999 Signwave. All rights reserved. <http://www.signwave.co.uk>. This software forms part of a project for the Media Theoretical Frameworks module at M.I.A. Not to be exchanged for money. This is parody software and must not be distributed as commercial software. For further information see the Autoshop web site <http://autoshop.signwave.co.uk>.

## The process of creativity



ability. The concept of value and (mostly) irreproducibility can demand suc-

the same way. A stretch instead, the process becomes the place of authentication.

appreciate the value of the authenticity" of these products, as value and intricate

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An extract from 'How I Drew One Of My Pictures' by Adrian Ward BSc, Sidestream, London email: [adrian@sidestream.org](mailto:adrian@sidestream.org)  
'How I Drew One Of My Pictures' accompanies the Signwave Autoshop application (available from <http://autoshop.signwave.co.uk>) and has been re-written and presented at the Generate Art '99 Conference in Milan, Italy recently. The newer essay (entitled "The Authorship of Generative Art") can be found at <http://www.sidestream.org/ga99>.

### Signwave™ Autoshop™

This project is a computer program that seeks to explore this creativity and capture my personal creative act as a programmer. It will perform creative tasks that I have delegated to the computer. Some (most) of these tasks may well have been impossible without the use of the computer - but this does not influence the focus of creativeness. The creative act is with my programming. Therefore a large amount of my documentation will surround the process I undertook to create Signwave™ Autoshop™ generative system. I have aimed to document the majority of my creative act, mostly as a series of short documents with instructions on how to achieve certain 'creative' tasks. It can be quite technical in nature at times - due to the technical nature of the medium.

**Interfaces:** The interface of a computer system (in professional circumstances) should generally be dictated by the processes the system is undertaking. "Multimedia" does not obey this rule.

When you see an hourglass, the system is busy. When you drag an icon, the system moves the resource represented by that icon. Why then is multimedia allowed to abandon these ideas? Because they are not "good"?

How can we justify representing an audio sound as a colour or shape on a computer system - just because the computer system allows us to? This is not rigorous. Why should a system turn a flowing grid of polygons into an array of ambient sounds - because it "can"? No.

New Media has discovered a niche of juxtaposing different existing mediums together to find new expressive forms of communication.

#### The Anti-Interface

As a final gesture of ironic, satirical and sarcastic expression, the Signwave™ Autoshop™ project will seek to destroy the myth of "Interface Condescension" (the notion that just because a system does something new, it should find an entirely new, patronising - and alien - interface).

Signwave™ Autoshop™ will portray the clean-cut, well-researched and founded guidelines of any Apple design-guideline abiding, industry standard, commercial software interface. It deliberately will appear to look like a well-known commercial piece of software (without breaking any copyright infringement laws). It will appear to be a nothing "special". However, because Signwave™ Autoshop™ is a two-sided project (see Introduction) it will be performing creative and experimental acts of generative systems through a very dry, clean-cut interface.

It will satirise the endless race to express "creativity" through interface design by making statements regarding juxtaposition of modes of operation: Signwave™ Autoshop™ will put "wild" creativity right up alongside technical design. It will hopefully cause amusement for the user, but more importantly, should question the whole ethos of "creative design".

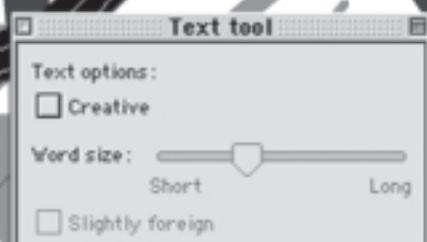
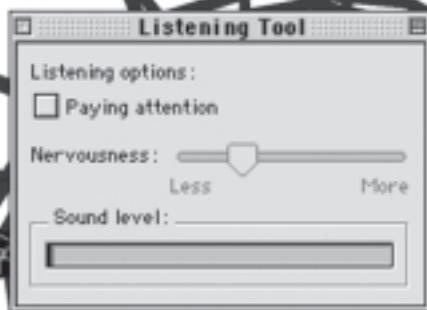
**Reasoning:** Autoshop™ firstly is capturing my creativeness in code structures. Secondly, it is automating creativity. It is a machine for drawing' (in reference to the Oulipian 'Machines for Writing') which takes the strict instructive codes of the true creator and replicates them automatically. Many of the Oulipo techniques invented by the surreal members of the movement could be described as 'machines' in the sense that as soon as you derive creativity into instructions, (regardless of whether they're carried out by a mechanical machine, computer, or even a human following the instructions precisely) you have automated a creative process. Many of the following "How to" sections could be carried out by a human being without going near a computer.

The "randomness" which I have imbued upon many of the routines in Autoshop connotes a less mathematical or formulaic approach to creativity. It is understandable that one could argue that when a routine makes use of a 'random' factor, the work suffers a loss of creative rigour, because you are surrendering your 'creativity' to the whims of an unpredictable function. It takes the domain of control away from the artist and gives it to the computer. However, it is paramount to point out that a computer can only move data about. It cannot - under any circumstances - generate a truly random number by itself. Computers generate random numbers by following a complex mathematical formula, which is 'seeded' with a starting value. If you give a computer the same 'seed' every time, it will generate the same sequence of random numbers. When you programmed a PC, you often had to tell it which seed to start with, on a Macintosh the system sets the seed from the current clock time. Thus, it stands to reason that should two people start up two Macintoshes at exactly the same time (providing both have exactly synchronised clocks, CPU and internal data bus speeds), and run the same program (again at the exact same time), that both Macintoshes would produce the same random sequence. Unlikely, but true.

Now compare this with Tristan Bastit's Vanishings of L.V.Gogh, an interactive computer-based artwork which utilises the user's sex and name to 'seed' the values to which it generates composites of artworks. Bastit's program has a seed that generates 98,304 different possibilities. Most computer seeds are 16-bit, which makes 65,536 different possible sequences of random digits. It follows therefore, that by using a computer's built-in random routines is no less creative than asking a user for their name so that the rules of composition can be generated. Autoshop merely automates the process one step further - by not requiring you to specify a starting seed - it uses the current time.

Finally, to claim that a system is Artificially Intelligent requires some form of validating argument. AI has traditionally implied an automated ability to mimic intelligent response. Recently it has been appropriated to include the notion of self-awareness, manifested in most AI code as feedback. If a system is able to feed data back into itself, it becomes a chaotic, complex and dynamical system that is as unpredictable as sheer creativeness.

# miocheotkég



## Known Bugs

- Mac: Some Mac users have experienced Out of memory errors when trying to allocate huge amounts of RAM to Inkscape. Hopefully the new object hierarchy in the upcoming 0.1d will help solve this strange problem.
- Shockwave SWF export sometimes creates damaged SWF files that crash your browser/plugin/flash player/computer (oops!)
- Win32: Double-clicking a file icon throws an exception error.
- Win32: Application beep upon quitting (?!).
- Win32: Binary Lines sometimes appear to work (although they really don't).
- Win32: Pressing CTRL N creates a warning beep even though it still works.
- Win32: some printers report an error message during this operation for Page Setup calls (non-printable can't be ignored).
- Win32: Shift and alt key are ignored.
- Win32: keyboard entry for text items is malfunctioning.
- Win32: Quicktime routines totally不稳定. Please report your findings.
- Win32: Some (PostScript?) printers don't print properly ... I need some feedback here.
- Win32: Copy-Paste-Export doesn't appear to work for Freehand, and Photoshop on pasting the artwork as paths, rather than rendering them (again, please send me some feedback on this). This is for you: [je@stub.org](mailto:je@stub.org)
- Win32: Bugs have become invisible for some reason. An old Redmond tool doesn't appear to work any more.

Next release 0.1d-r17 (no release date)

completely re-implemented internal object hierarchy which makes it easier to implement vector-based effects and rendering. Possible ramifications of this means that DOCUMENTS SAVED IN INKSCAPE WILL NOT BE COMPATIBLE WITH THIS RELEASE. So if you do any work in Inkscape, you may also be scrapping the plug-in artwork. More details about this will come in another article.

Also, the document window now looks much nicer. Paths now support rounded end caps, stroke weights, and stroke styles per SWF standard. The stroke palette has been updated. Line strokes - rounded end caps, stroke weights, and stroke styles in the stroke palette - make it much easier to draw. New "Dash script" (ie, the most important change) allows for dashed paths with variable dash lengths. Other changes include:  
- corrected printer margins inaccuracy  
- new document setup dialog. Rather than always having to choose a default printer in the menu (which was causing problems before), you may now choose a printer in the setup dialog before the document is created. This resolves other problems such as that bad corruption of dimensions is avoided when setting the document size if you were drawing at a different resolution.  
- new style tab in the setup dialog for alternative dimensions...  
- new Form tab in the setup dialog for alternative dimensions...  
- object properties much improved  
- fixed bug where objects would move to different layers when copied and pasted  
- fixed weird cosmetic bug: when round text showed an arrow  
- lots of new features and improvements.  
Convert bug fix: when Break path - split path in two in the Montage tool, the two paths are separate. When you move one, the other is correctly moved with it.  
Line tool: the line tool now has individual handles for each segment, so it's easier to move them apart. The line tool menu.  
Select tool: as with them thanks to the new Rotate and Scale tools, it's now much an objects weight affects how it rotates. The weight is saved in the preferences file (much longer save time).  
Swatch editor: swatch dimension is to be corrupted (resulting in our was broken second when the default toolset includes the polygon tool (thank you, Inkscape, for the inner selection field that was causing non-selectable

## GM manifesto \*

A spectre is haunting the music industry -- the spectre of generative music. All the powers of the established 'music' industries have entered into a holy alliance to exorcise this spectre: performers, composers, distributors, technicians, record companies and police-spies. Auto-generative systems have established the possibility of advanced music production that disposes of the need for all these characters with their fixed role-play and narrow creative parameters. More than simply aiming to stimulate spontaneous creative activity and to diminish the significance of the performer or artist, GM experiments run against the grain of the music industry as a whole. Where is the opposition that has not hurled back the reproach of generative music, against the more advanced combinations of art, music and the application of science and technology? Clearly at this point in time, there is a state of flux with performers undermining the established production and distribution paradigms, and yet for the most part, the performers themselves still rely on very conventional compositional and performative strategies, fawning fans and merchandise. GM opposes this approach. Two things result from this fact:

I. GM is already acknowledged as an attack on capitalist values and the commodity form.

II. It is high time that the so-called avant-garde recognised that radical potential lies in the link to technology and consumption, and that sound is always experienced in space and time.

To this end, GM investigates the creative possibilities of auto-generative systems. GM says that creativity should integrate art and sound production with the advances of science and technology, and that with the aid of computers, music becomes 'self-regulating', 'self generating' and 'self consuming'. The listener and spectator, always situated (auditorium, club, online, en masse or in private), can have a direct bearing on the action of this music. Freed from the tyranny of the rewind/play button, from the ions and grooves of recording media, listener and sound are now equal components of the auto-generative system. Receivers and transmitters of a digital-genetic code: transmit, stream, cast - go forth and multiply. Audio of the world auto-generate.

GM 2001





G M 1  
SET 99  
Plymouth  
Sherwell  
Centre...GM2  
The Cavern Club in  
Exeter...GM3, MOMENTS  
OF MODERN MADNESS, The  
Cube, Bristol [with Alexi  
Shulgin, Andi Freeman and  
Jason Skeet, and special guest  
DJ - Matthew from Rephlex]-  
[supported by The Cube Cinema, da2  
[digital art 2], Artec, ACE, ESF,  
SkillNet South West]...GM4 Lovebytes,  
Sheffield...GM Dead and Alive at...  
[www.CAiia-STAR.net/projects/](http://www.CAiia-STAR.net/projects/)



S.T.I. IS FUNDED BY THE SCIART PROGRAMME (SUPPORTED BY

### - The S.T.I. Project: The Search for Terrestrial Intelligence -

S.T.I. turns the technologies that look to deep space for Alien Intelligence back onto Planet Earth in a quest for 'evidence' of Terrestrial Intelligence. Using satellite imaging and remote sensing techniques S.T.I. will scour the Planet Earth using similar processes employed by SETI (the Search for Extra Terrestrial Intelligence). Looking at Earth from space the project will develop processing techniques using autonomous computer software agents. In their search for evidence of intelligence the agents will generate new images, animations and audio (which may produce more questions than answers) which are publicly accessible on the S.T.I. website [[www.CAIIA-STAR.net/STI](http://www.CAIIA-STAR.net/STI)]. The S.T.I. Project Consortium brings together artists, scientists and technologists from four research groups (STAR, CNAS, ATR, NRSC) based in three organisations, the University of Plymouth, ATR Media Integration & Communications (Japan), and the National Remote Sensing Centre (NRSC). The S.T.I. Project is constructed by a Development Committee, which consists of eight individuals, they are: Mike Phillips (Project Co-ordinator), Geoff Cox and Chris Speed from STAR @ University of Plymouth; Dr Guido Bugmann and Dr Angelo Cangelosi from the Centre for Neural and Adaptive Systems (CNAS), @ University of Plymouth; Christa Sommerer and Laurent Mignonneau from ATR Media Integration & Communications; Dr Nick Veal: Technical Director, National Remote Sensing Centre. S.T.I. establishes a common ground for the consortium by sharing the collective knowledge of remote sensing, imaging technologies, autonomous agents (AI and Neural Networks), and On-Line interaction. The Project fuses this knowledge into a challenging exploration of planetary data analysis, through a process of experimental prototyping of a number of autonomous data analysis agents that reside on the S.T.I. website. Vision dominates our culture and lies at the heart of scientific and artistic endeavour for truth and knowledge. Increasingly the dominance of the human eye is being challenged by a new generation of technologies that do our seeing for us. These technologies raise critical questions about the nature of the truth and knowledge they elicit, and the way in which we interpret them. The S.T.I. Project goes beyond the irony of the search for terrestrial intelligence on Earth by engaging with our understanding of the 'real world' through our senses, whether real or artificially enhanced. Will these autonomous systems 'know' the 'truth' when they 'see' it? The S.T.I. Project engages in critical issues surrounding the shift from the hegemony of the eye to the reliance on autonomous systems to do our seeing for us. This shift has an equal impact on scientific processes and creative endeavour. By turning away from 'outer space' to an examination of 'our space' the project also engages public interest, as expressed in the popular imagination through science fiction (X files, etc), in the alien within our midst. Do we recognise ourselves when seen through our artificial eyes. For example: 'Face on Mars'. The blurred and faded images sent back by the 1976 Viking Orbiter reveal little to the naked eye, until they are digitally processed. The processing slowly reveals a skull like face that stares blankly from the surface of mars. The technology strips away the grain and fuzz and re-visions. The 'face' becomes gradually un-obscured, progressively un-veiled, with features suggestive of eyes, a ridge-like nose, and a mouth, its 'truth' emerging through the technology. Maybe the processing techniques employed allow us to see more clearly the images we nurture inside our heads. Maybe they bring into sharp focus the things we want to see. The output from the S.T.I. project will generally conform to the Open Source definition (Version 1.7), ie: free redistribution, distribution in source code as well as compiled form, allowing modifications and derived works, no discrimination against persons, groups or fields of endeavour, etc.

### - The S.T.I. Project: The Search for Terrestrial Intelligence -

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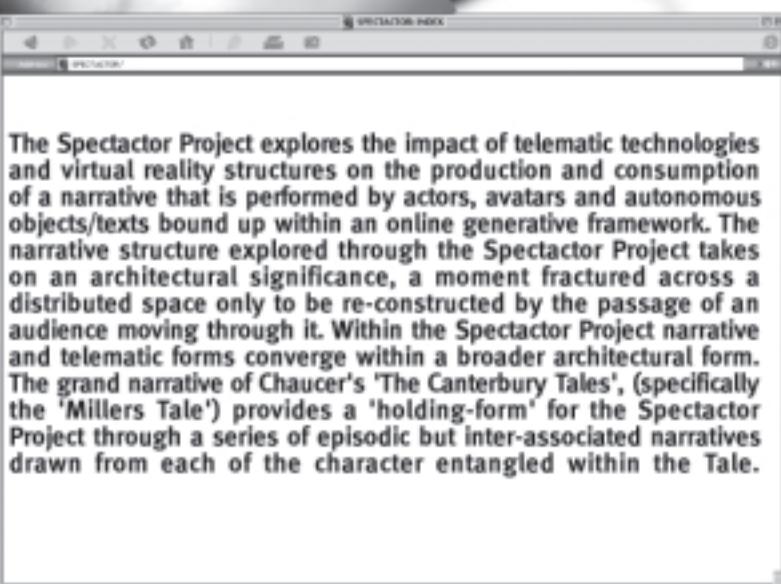
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The Spectator Project can be found at:  
[www.CAiIA-STAR.net/projects/SPECTATOR](http://www.CAiIA-STAR.net/projects/SPECTATOR)  
The Spectator Project is funded by DA2 and STAR and involves limbomedia, Mike Phillips, Peter Ride, Liz Swift, Simon Turley, Laura Watts, Karen Wheatley.

"But nathelees, whil I have tyme and space,  
Er that I ferther in this tale pace,  
Me thynketh it acordaunt to resoun  
To telle yow al the condicoun  
Of ech of hem..."  
(Chaucer, The Canterbury Tales)



