

## GOLDSMITHS Research Online

Project

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Jefferies, Janis K.

### Five research projects in progress, 2004-2007

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Janis Jefferies

Five Research Projects in Progress

2004 - 2007



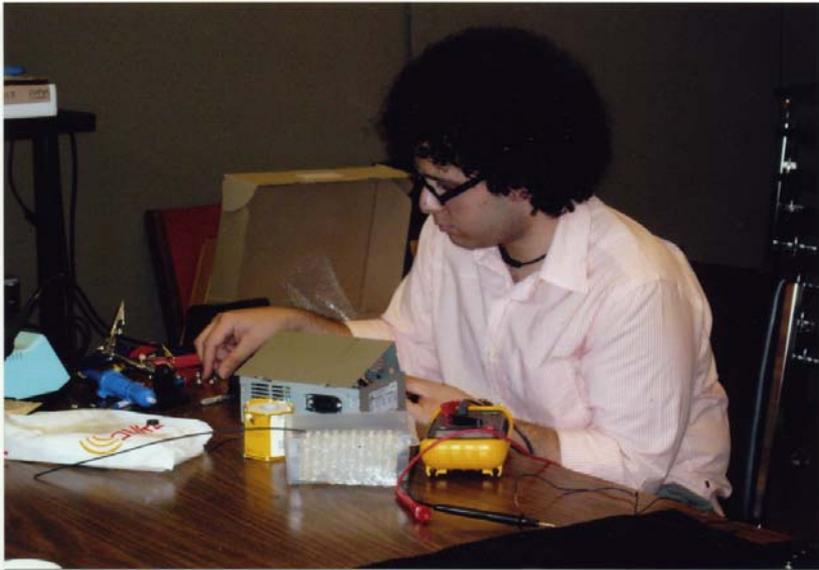
## Textiles, Translations, Transmissions

Hexagram/Goldsmiths-Layne, Soleymani, Jefferies, Zimmer.

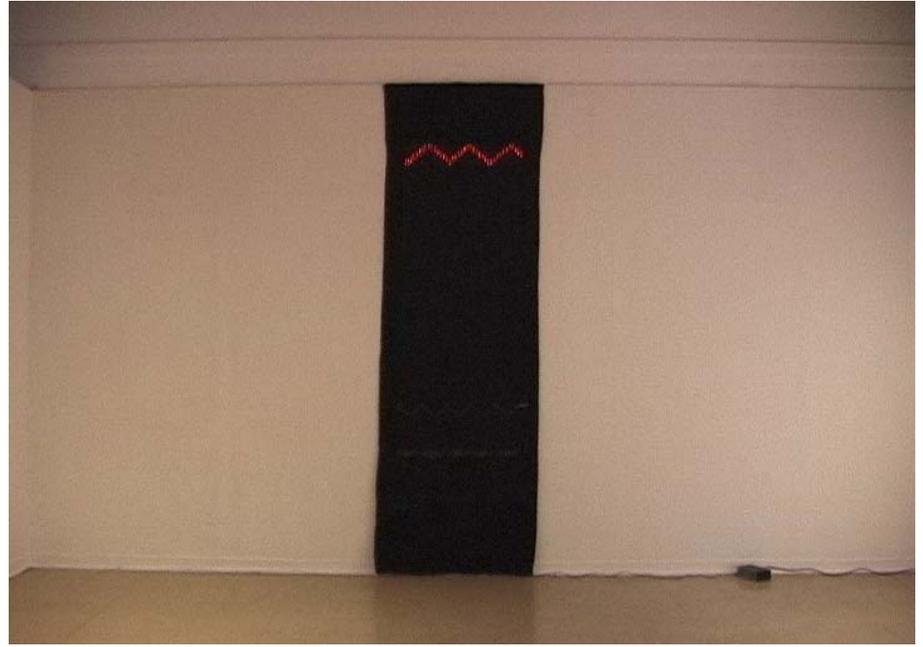
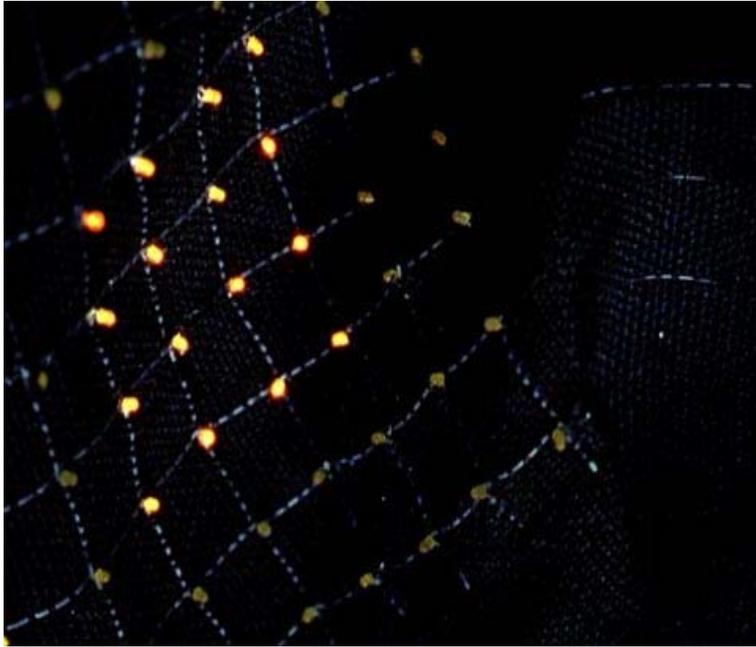


A research project that will take advantage of the ability of fabric to impart meaning through material and electronic languages.

- Combine a creative approach to the textile arts with technical innovations in circuitry and wireless transmissions;
- Explore ubiquitous computing, mobility and interactivity through the introduction of electronic devices into fabric structures;
- Create animated displays on the surface of cloth, in order to extend the dynamic, narrative abilities of cloth;
- Develop a transitional space in which meanings are altered and textiles are invigorated into new patterns of discovery.



HEXAGRAM Textiles, Translations, Transmissions



Wall Hanging: Electronic Cloth Concordia 2005

The texts at various meter marks make reference to the site of the HUB as a former seed warehouse in Lincolnshire, UK. This is the first incarnation of the text messages in the cloth and as the textile is shown in other locations, new texts can be added that will refer to the future sites. As the cloth changes exhibition spaces, texts may be deleted or rewoven with new ones, leaving traces of the different locations of display.

One: text about Sir Isaac Newton, born in Lincolnshire:

"Looking for truths, perplexed by gravity, thinking about light and motion, a fleeting red pattern reflects only one of the rays of possibilities....."

Two: description of qualities of plants as described in a seed catalogue. ( The Hub at Lincolnshire used to be a seed warehouse).

rare, common, aromatic, smelly, ponderous, piddly, floriferous, leafy, weedy, picky, poisonous, nutritious, sour, sweet, bitter, toothsome, fruity, barren, hard, soft, stemmy, creeping, rooty, viny, night-blooming, day-blooming and just blooming.

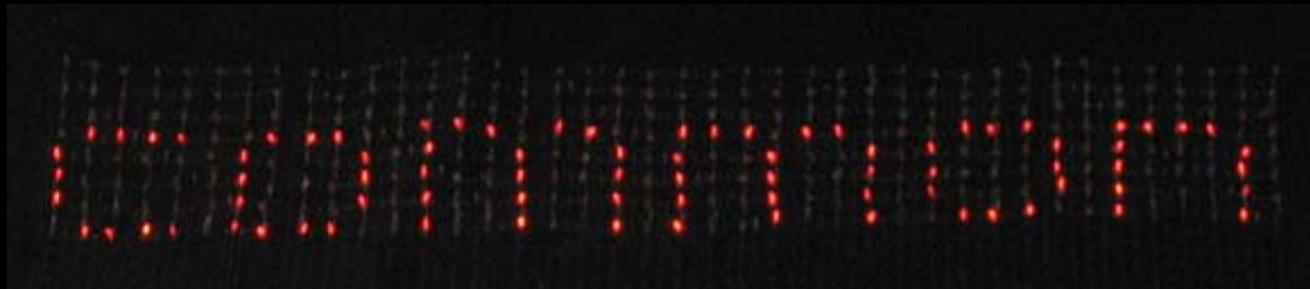
Three: A regular, single line pointed twill pattern.

Four: Babble texts from email SPAM inclusions. This section can not be triggered by the body, but needs a hard flat plane (such as the pedestal in the last section of the video To trigger this display.) The text is interrupted at times with a heartbeat-style bleep.

Come history me. Grew me sea. Sound she idea, fun. Drive pull. Decimal the table all, decide. Finger science. Wonder through line.

Five: a regular double line pointed twill patten. This is the default pattern when no one is in close proximity to the wall hanging.







## The Digital Studios Goldsmiths College

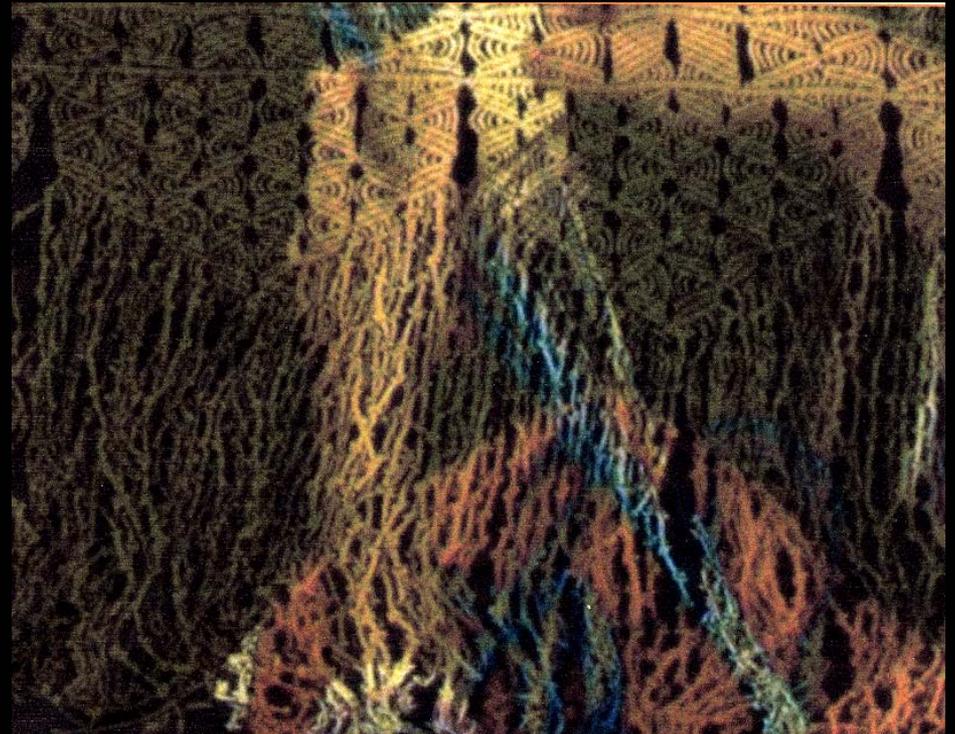
Janis Jefferies  
Robert Zimmer

Miguel Andres-Clavera  
In-Yong Chong  
Helen Weston



Janis Jefferies studio at Hexagram in Montreal

## Loom of Tales



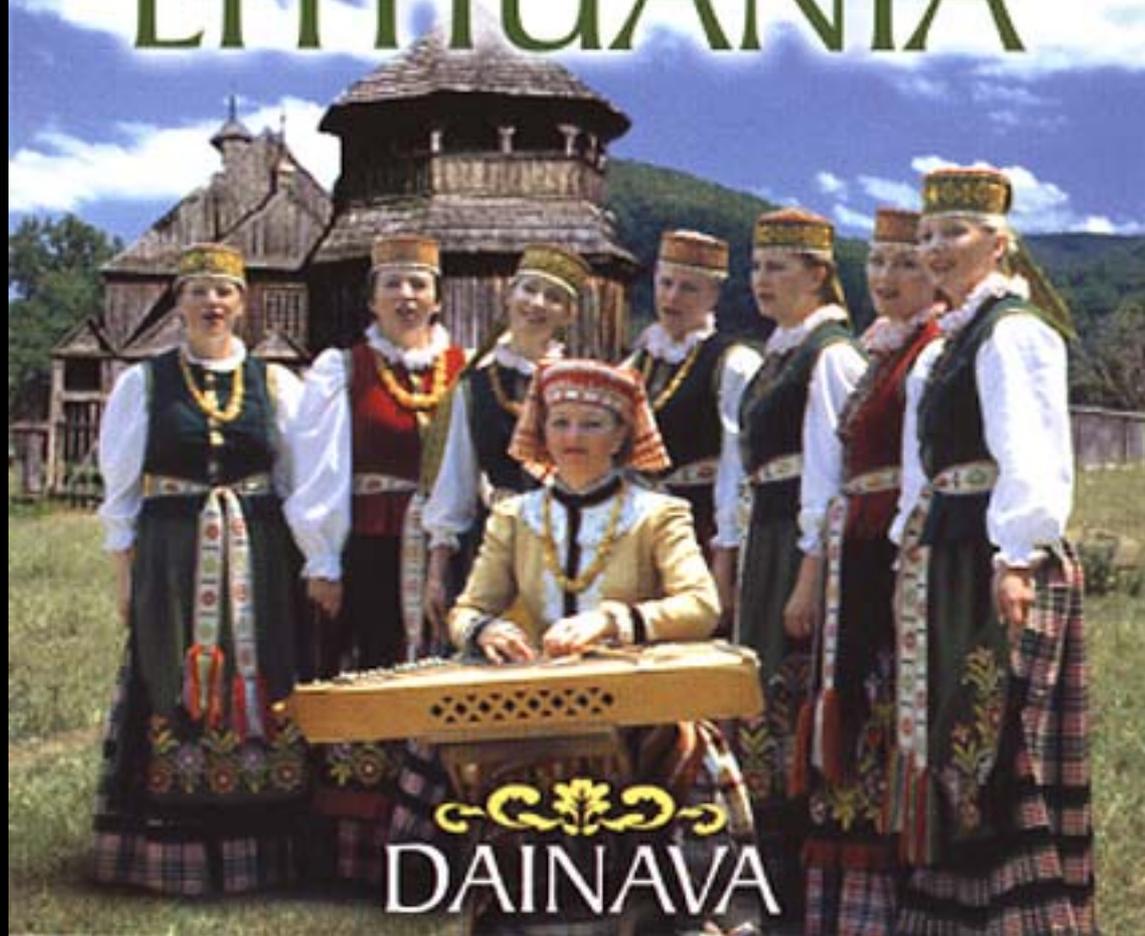
## Sash Songs

Sash Songs extends a Wall of Woven Sounds. Lithuanian Sashes are used to examine, patterns and to create an archive, of sounds within new forms of technology that uses pattern recognition as an interactive model of communication. The project aims to reflect experience and the contradictions of society, within the present but recognising the issues of the Ethnographic, and the folk,, as the past mutates from the material into immaterial forms.

In the first phase of a joint collaboration between Janis Jefferies and Tim Blackwell micro-textures are explored by clicking the mouse at various points on the pattern, causing a small tile of image texture to unweave into a grain of sonic texture, which is immediately heard. Our aim is to stage the users experience between the screen and the wall through touch and aurality

The virtual textile challenges several histories, firstly the history of acoustic attenuation. Seen and not heard, textile and their many textures absorb sound and brings warmth into the coldest of architectural environments. In our project, sound emanates from within the texture and promotes action. The viewer is activated to form new artworks on the virtual wall, and new sound patterns in space.

Songs & Dances from  
**LITHUANIA**



  
**DAINAVA**

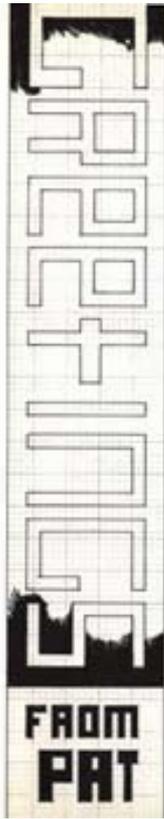
Rīga 800

vēlmes pilsēta



«Latvijas Radio» 1999., 1993., 1998. gada ieraksti Mežaparka Lielajā estrādē.  
Skaņu režisori: Ķarlis Kurmiņš, Mārtiņš Bērziņš, Normunds Slaiss,  
Jānis Porziņis, Jāreps Kalberga, Mārcis Kreicmanis.  
© 1999 - 2000 «Latvijas Radio». © - © 2001 /uz šo saikumu/ «Mikrofona Ieraksti».  
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Tulkoja: Ilze Ozerevska. Foto: «A.F.I.». Dizains: Edijs Holmanis.  
[www.micron.lv](http://www.micron.lv)

S o n g   F e s t i v a l   i n   R i g a  
**D Z I E S M U S V Ē T K I**  
**R i g ā**



I

Kỳ ger - vi - nas, dau - tồ - to,

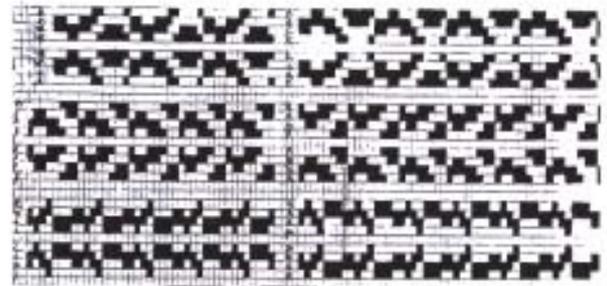
II

dau - tồ - to, dau - tồ - to.

Handwritten musical notation for three staves, including lyrics and musical symbols.

Handwritten musical notation for three staves, including lyrics and musical symbols.

Handwritten musical notation for three staves, including lyrics and musical symbols.



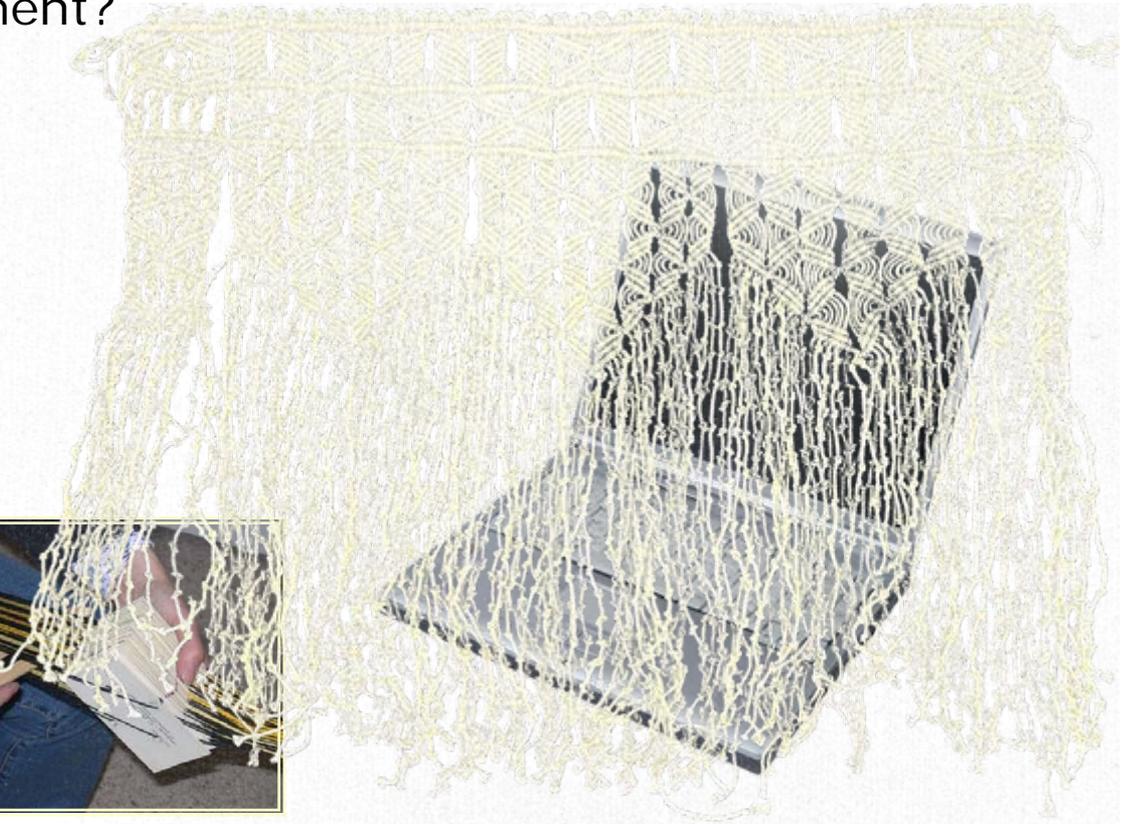


# LOOM OF TALES

**Goldsmiths**  
**UNIVERSITY**  
**OF LONDON**

Janis Jefferies  
Maureen Thomas

Can the traditional arts and crafts of oral composition and weaving inspire and create engaging new narrative media content forms in the interactive digital environment?



For story-engine software see 'NM2: New Media for a New Millennium' (2004-2007) <http://www.ist-nm2.org>, in which both the Digital Studios , Goldsmiths and the University of Cambridge, as well as B, are active development partners



The word 'text' comes into English from Latin:

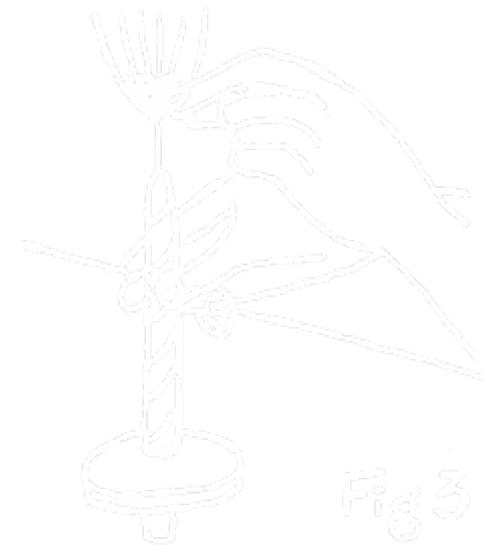
texo, **texere**, texui, textum [to weave; to twine together, plait; to put together, construct, build]; of speech and writing, [to compose];

**textum** -i, [woven cloth, a web; fabric]; of composition, [style]

The primary meaning of the word 'text' is 'woven' - as in English 'textile'

In cultures where the printed text is not fundamental to narrativity, the woven pattern often is

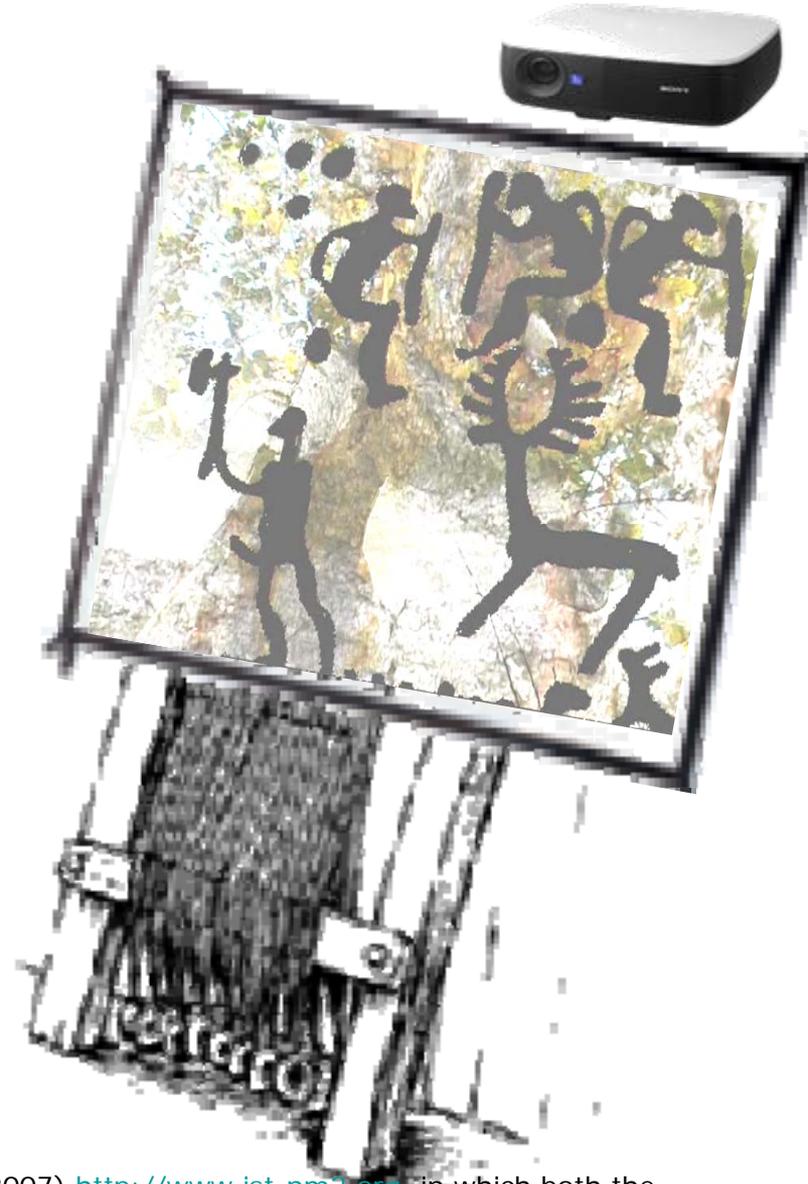
# LOOM OF TALES video installation



# LOOM OF TALES video installation concept

Goldsmiths  
UNIVERSITY  
OF LONDON

Janis Jefferies  
Maureen Thomas



For story-engine software see 'NM2: New Media for a New Millennium' (2004-2007) <http://www.ist-nm2.org>, in which both the Digital Studios, Goldsmiths and the University of Cambridge, as well as B, are active development partners

LOOM OF TALES uses interactive digital technology to weave the myths of the Scandinavian and Baltic worlds, bringing alive this important cultural heritage for twenty-first century audiences in an active, personalised way

Telling myths is a living way of shaping, questioning, updating and re-patterning cultural identity

In *Loom of Tales*, the physical movement and activity of weaving is brought back into the participative practice of storymaking - translating directly, via the software, into the patterning of narrative, the flow of video images and the rhythms of the authentic songs delivered as original contemporary music in the mode of traditional singers



The vocabulary of spinning and weaving is common in the context of storytelling in many cultures:

- Spin a yarn
- Weave a tale
- Embroider a tale
- Weave together the strands of a story
- Unravel the tale
- Follow the twists in a tale
- Follow the red thread of a story
- Break the thread of a narrative
- Find a hole in the fabric of the narrative
- Weave a rich narrative tapestry
- Reach the denouement ('unknotting') of the plot

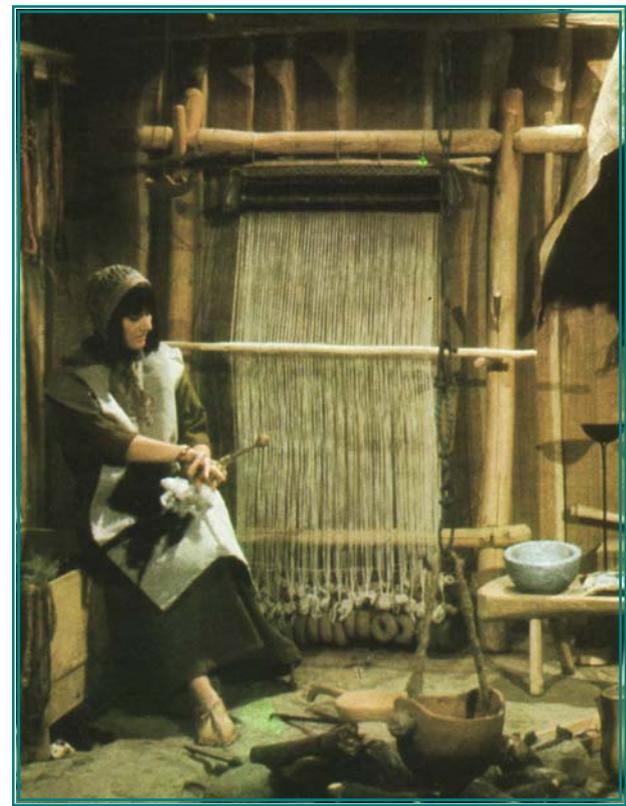


The tradition of telling stories in textile is ancient

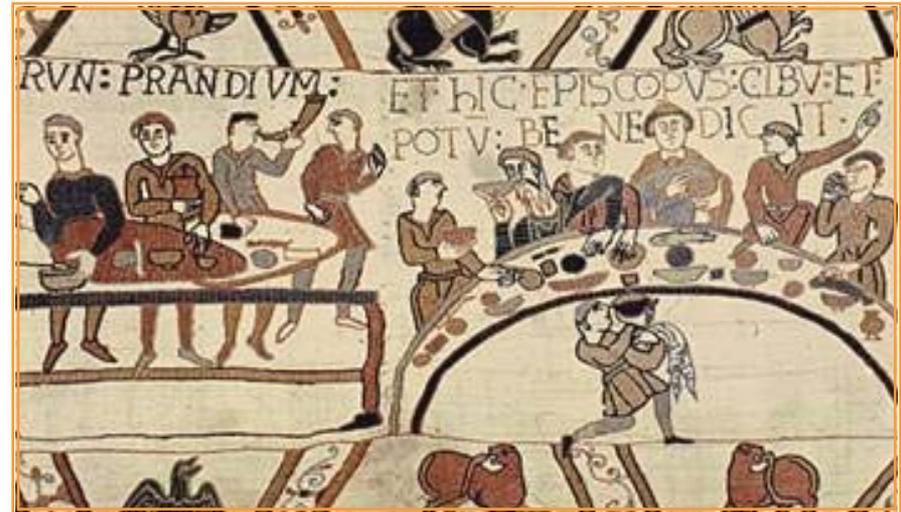
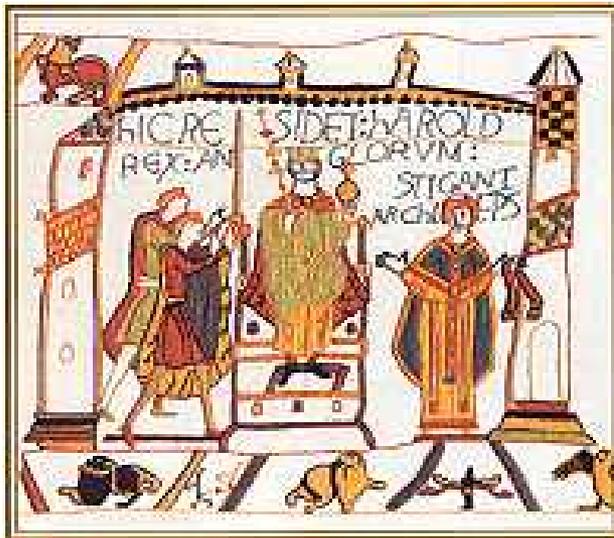


Oseberg Tapestry, Sweden  
(c. 800-850)

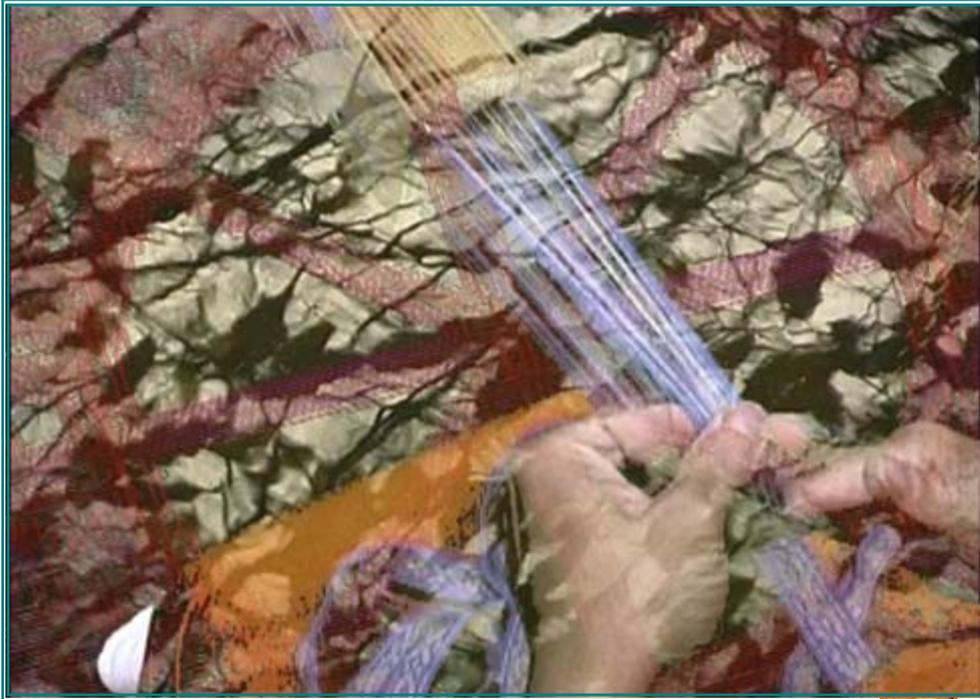
11<sup>th</sup>-century  
Weaver  
(Reconstruction,  
Roskilde  
Museum  
Denmark)



Bayeux Tapestry, Normandy, France (c. 1170)



Behind the famous Bayeux Tapestry lies a long tradition of spinning yarns and weaving tales - stretching all the way from prehistoric times



Three women, spinning, winding and weaving, from prehistoric Central Europe



Anglo-Saxons and Vikings did tablet-weaving, as do Eastern European and Sami weavers today, making woven belts.

In cultures where the printed text is not fundamental to narrativity, the woven pattern often is.



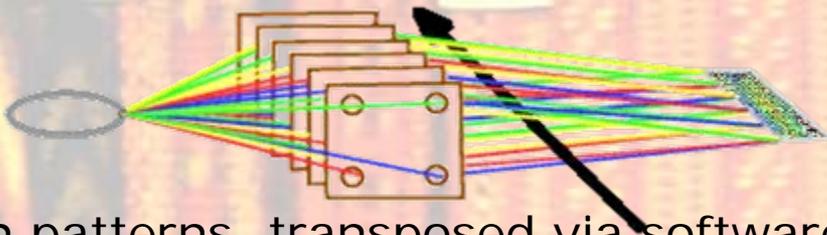
Tablet-woven sashes from Latvia and Lithuania show a rich variety of patterns and hues



Photo by Janis Jefferies, Oct 2006

Each pattern has traditional elements, but is also personal to the weaver and the wearer

Each handwoven sash can constitute the pattern of a story,  
- each story as long as the sash that fits the wearer



*Loom of Tales* will use such patterns, transposed via software, to weave a new, personalised, audiovisual tale for each visitor



The letters of the alphabet can also be woven into a sash



For *Loom of Tales*, Janis Jefferies will design sashes which contain memorable phrases from each story woven together by an interactor, to take home after a visit to the installation as a tangible reminder of the arts of weaving and talemaking

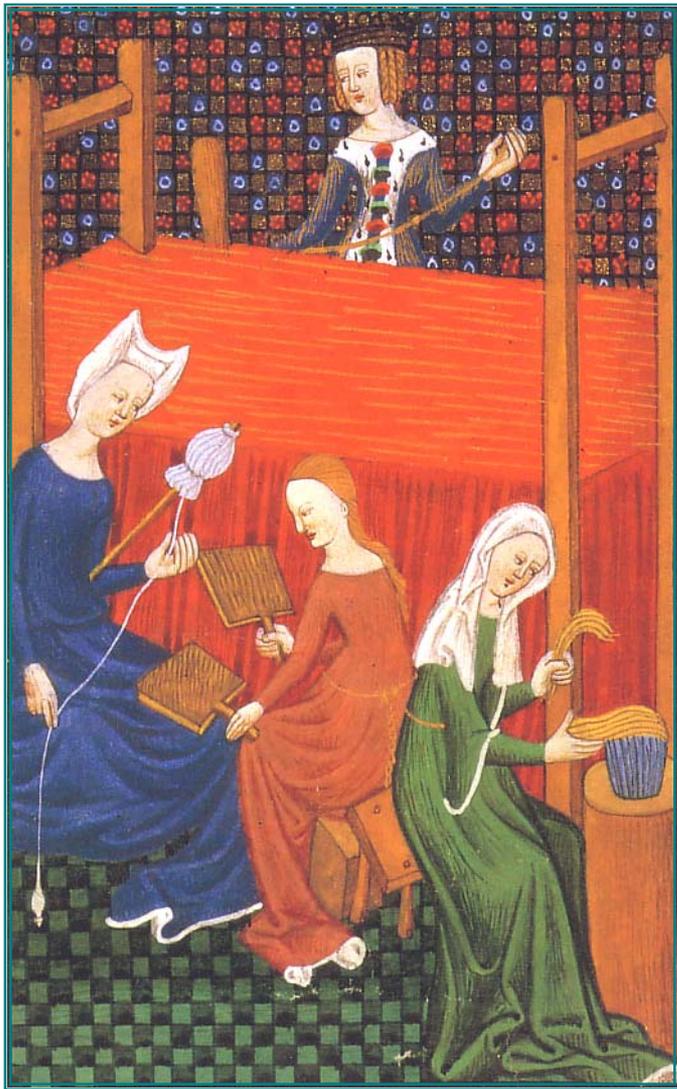
Sashes are woven double-sided, with a different language on each surface





Tablet Weaving, as it survives in the Baltic, and was done in Anglo Saxon England and the Nordic countries in the Viking Age, provides the patterns both for the stories and for the tangible interface of the installation, as well as underlining the content of the myth tales





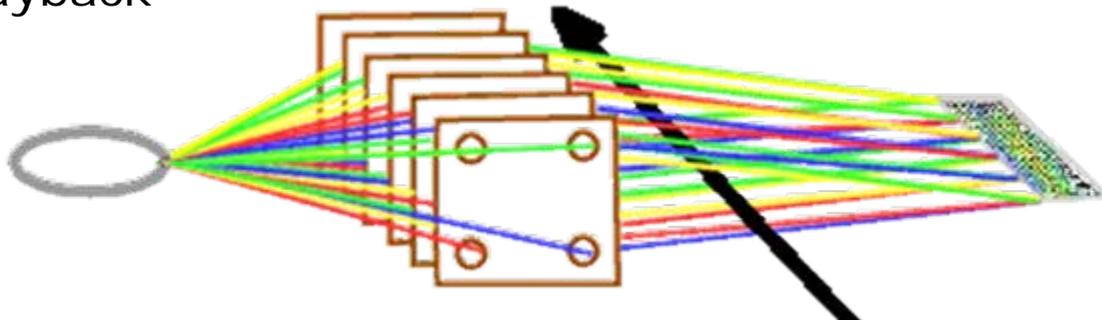
Spinning, Weaving, Singing and Storytelling are important arts in all classes of society in the Middle Ages as well as the Anglo-Saxon and Viking Age, and are closely associated

*LOOM OF TALES* develops a tangible interface based on the Baltic and Scandinavian traditions of weaving 'story-sashes', whose patterns embody the shapes of orally-performed improvisational 'sung tales'

Textile artist Janis Jefferies will use her expertise and experience in textiles and of technology in art, and her long fascination with Latvian, Estonian and Lithuanian sash-weaving craft, to create a contemporary digital version of this ancient practice

Writer and multimedia/drama director Maureen Thomas, who has been working with Nordic myth as drama and interactive artwork since 1986, will research and provide the myth stories with Kariina Gretere and research partners, to create reconfigurable audiovisual versions, using the techniques of oral sung tales

Together they will develop the logic of the taletelling and music to match the patterns of weaving for both tangible interface and video playback



# DRAFT SUGGESTIONS FOR MUSIC/IMAGE ONTOLOGIES FOR WEAVING TALES

Colours could be the dyed threads, the qualities textures and thicknesses

Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7
RED	ORANGE	YELLOW	GREEN	BLUE	INDIGO	VIOLET
<i>fiery</i>	<i>bright</i>	<i>very bright</i>	<i>middle</i>	<i>dark</i>	<i>very dark</i>	<i>very dark</i>
<i>exciting, dangerous</i>	<i>uplifting, inspiring</i>	<i>delightful, awe-inspiring</i>	<i>reassuring, comforting</i>	<i>sinister, mysterious</i>	<i>sinister, alarming</i>	<i>fearsome, awesome</i>
MUSIC						
<i>Allegro appassionato</i>	<i>allegro moderato</i>	<i>vivace</i>	<i>andante</i>	<i>adagio</i>	<i>adagio maestoso</i>	<i>no rhythm, held note/ chord</i>
<i>passionate</i>	<i>soaring</i>	<i>ethereal</i>	<i>steady</i>	<i>sombre</i>	<i>majestic</i>	<i>threatening</i>
<i>thrilling</i>	<i>celebratory</i>	<i>entrancing</i>	<i>mellow</i>	<i>chilling</i>	<i>mournful</i>	<i>harsh</i>
<i>piano</i>	<i>energico</i>	<i>pianissimo</i>	<i>mezzo-forte</i>	<i>forte</i>	<i>rallentando</i>	<i>fortissimo</i>
<i>contralto</i>	<i>mezzo-soprano</i>	<i>soprano</i>	<i>tenor</i>	<i>baritone</i>	<i>bass-baritone</i>	<i>bass</i>
IMAGE						
<i>red glowing fast</i>	<i>orange brilliant tripping</i>	<i>yellow shimmering very fast</i>	<i>green dazzling moderate</i>	<i>blue dappled unsteady</i>	<i>indigo shadowy very slow</i>	<i>violet black static</i>

# DRAFT SUGGESTIONS FOR MUSIC/IMAGE ONTOLOGIES FOR WEAVING TALES

Colours could be the dyed threads, the qualities textures and thicknesses

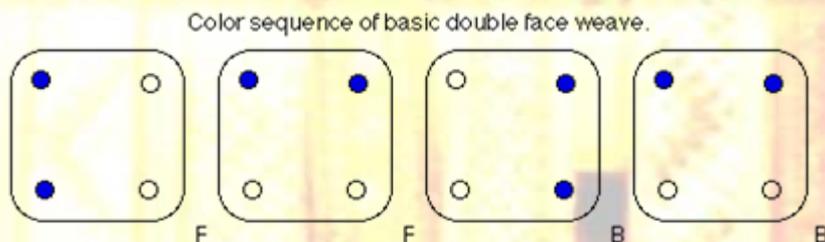
CATEGORY 1	Category 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Category 6	CATEGORY 7
RED	ORANGE	YELLOW	GREEN	BLUE	INDIGO	VIOLET
fiery	<i>bright</i>	<i>very bright</i>	<i>middle</i>	<i>dark</i>	<i>very dark</i>	<i>very dark</i>
exciting, dangerous	<i>uplifting, inspiring</i>	<i>delightful, awe-inspiring</i>	<i>reassuring, comforting</i>	<i>sinister, mysterious</i>	<i>sinister, alarming</i>	<i>fearsome, awesome</i>
ELEMENT						
FIRE	EARTH	EARTH	AIR (China: wood)	SPACE (China: metal)	WATER	WATER
Copper	Gold	Gold	Silver	Lead	Iron	Iron
carnelian	amber	amber	amethyst	quartz crystal	iolite	iolite
Summer	Late Summer	Late Summer	Spring	Autumn	Winter	Winter
hot	dry	dry	windy	humid	cold	cold
south	centre	centre	east	west	north	north
sight	smell	smell	touch	sound	taste	taste

Visitors to the *Loom of Tales* will literally weave their own story as they physically handle the materials of the interface

They will be enabled to fashion their own personal story-sash (whatever their level of skill and aptitude for learning this craft), using their own choice of colours and picking their own patterns

As the storyseekers weave, so the recombinant video and original music components of the Anglo Saxon myth stories will be woven into associative narratives, and displayed on the 'screen' of the Loom itself

Visitors will be able to take home their own story-sash, incorporating a phrase from the tale they have woven, and a CD of their personal audiovisual edit



# Tradition and Innovation



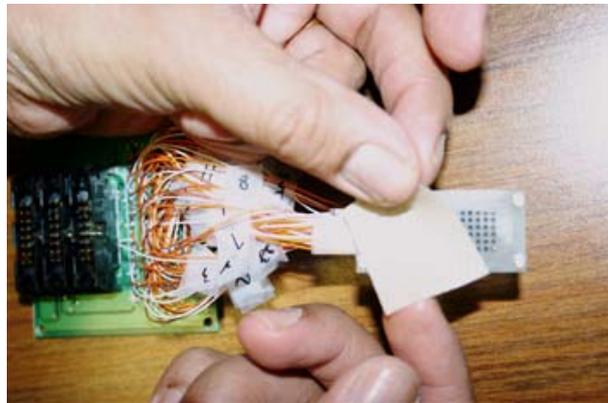
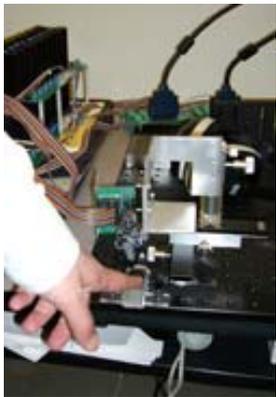
## Digital Craft



# MIT Touch Lab

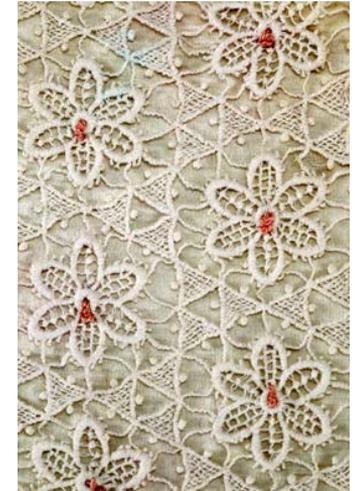
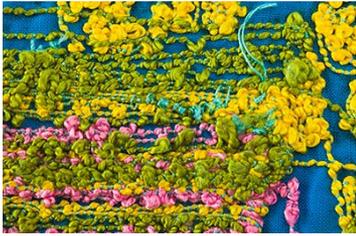
## *Intimate Technologies*

We are working with Dr. Mandayam Srinivasan, director of the Touch Lab, MIT, Boston USA and a pioneer in human and machine haptics. We are working on touch interfaces so that people can 'feel' a piece of cloth virtually. We are looking at how our material collection can inform technology by the development of interactive and creative displays for creative practice by a variety of different users.



*36-pin array tactile display, MIT and detail of textile from the Constance Howard Resource and Research Centre in Textiles Material Archive.*

## Constance Howard and Resource and Research Centre in Textiles

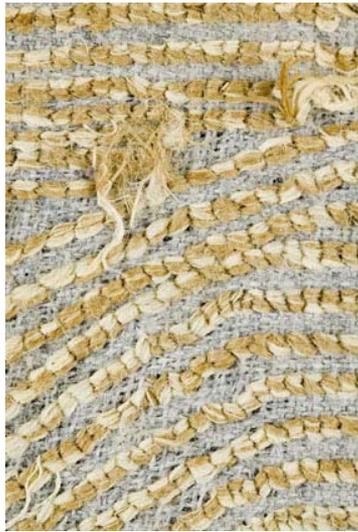
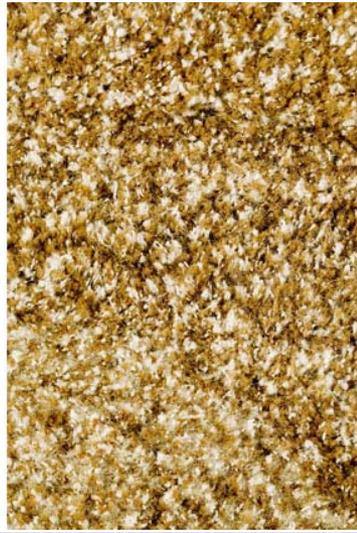


The Centre is dedicated to the research and study of textiles within a broader context of visual and Material culture. The value of textiles as a primary source of cultural knowledge and experience is increasingly being recognised.

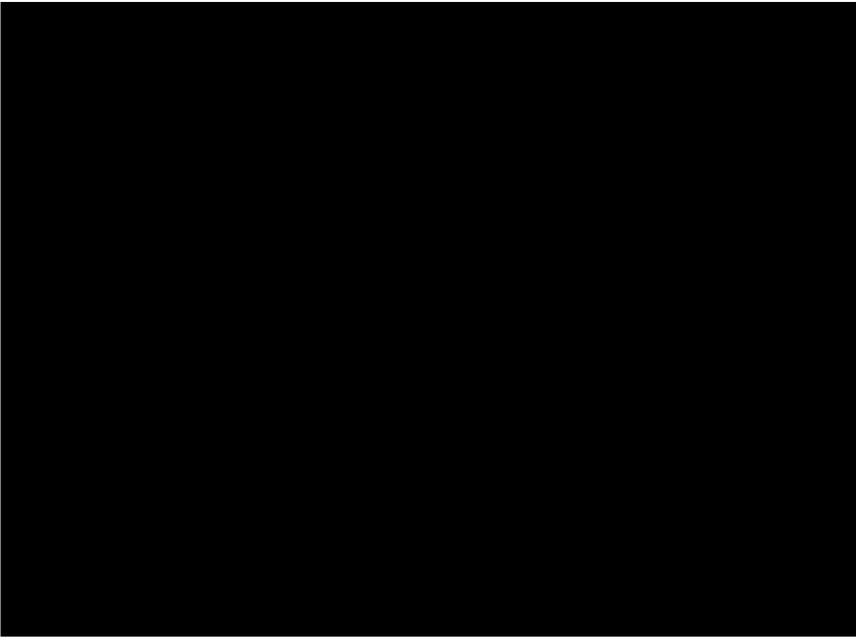
The Centre provides a distinctive resource for multi-faceted research and from many different perspectives.



Constance Howard Material Collection  
[www.goldsmiths.gold.ac.uk/constance-howard](http://www.goldsmiths.gold.ac.uk/constance-howard)



Helen Weston Tufting gun samples for Intimate Technologies  
Goldsmiths 2005



Helen Weston Tufting gun samples for Intimate Technologies  
Goldsmiths 2005



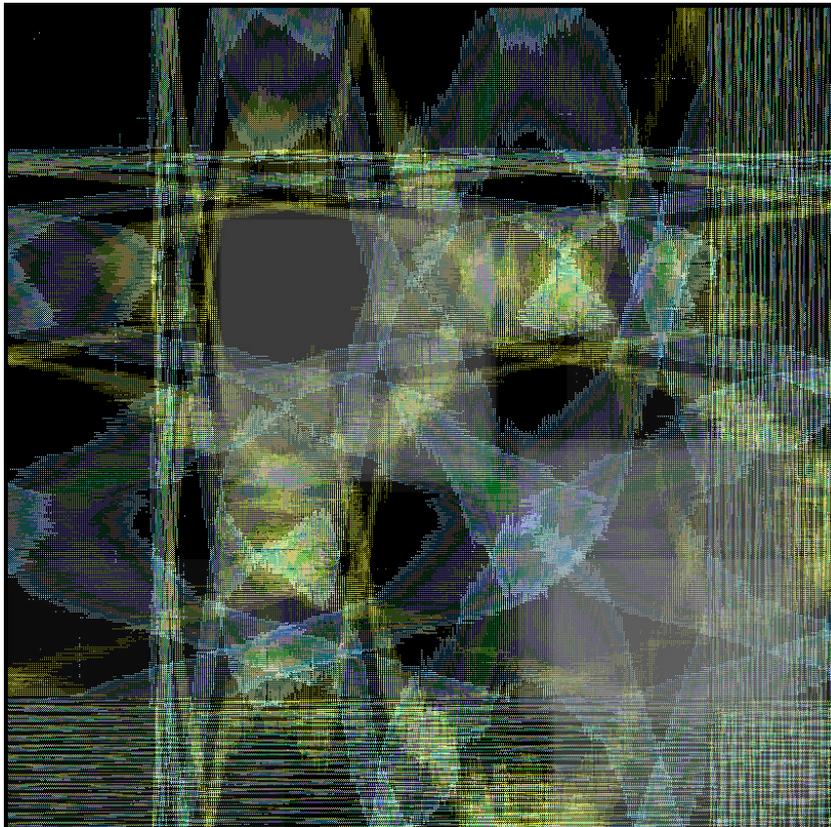
**Woven Sound, refers to the weaving of images with live sound.** Incoming sound is digitised by the computer into a stream of left and right audio samples. In the woven sound algorithm, each stream becomes a linear thread, with samples mapped to pixel values. The threads can be woven in various ways, but a simple and effective weave is to use a warp and weft threading, so that left samples become the vertical warp and right samples become the horizontal weft. For continuity, the threads are doubled-back at the image edge.

In a live weave, the patterns are made in real time; each image represents several seconds of sound.

The following images © Tim Blackwell 2006

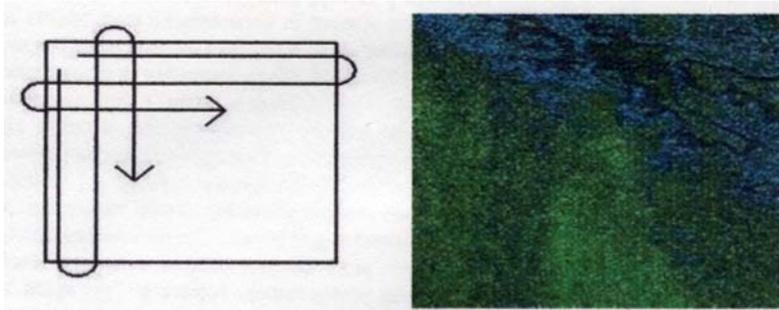
A woven multi-phonetic saxophone texture

**Images from sax + brush + Swarm Techtiles** recording,  
11th May 2006 (Tim Blackwell, Janis Jefferies, human performers)



The weaves show superpositions of saxophone (curvy patterns) and brush sounds (straight lines). Also evident is microtexture washing, a dilution of local texture caused by unweaving into sound (see [Swarm Techtiles](#))

# Tech-Tiles

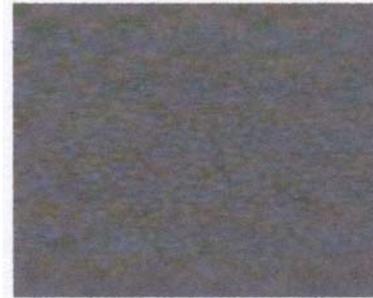


**Fig 1.** Warp and weft scan lines

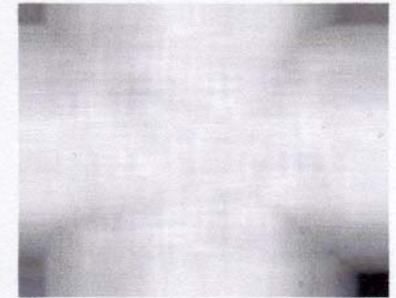
**Fig 2.** Uniform and Laundry by Janis Jefferies.

Photo: David Ramkalawon

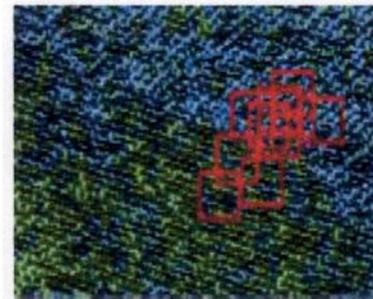
Experiments were formed on images of a sunset, a calm seascape, a Eucalyptus tree, the Jefferies textile, recorded saxophone and voice, and synthetic images of pure tones, white noise, color rainbows and an image with an island of noise centrally placed on a constant color background. Some of these images and sonic tech-tiles are available for download at [www.timblackwell.com](http://www.timblackwell.com).



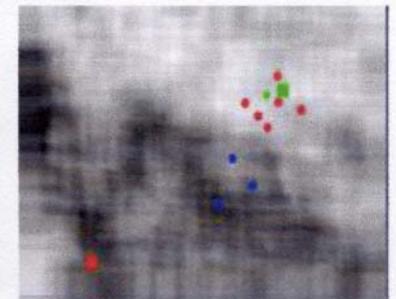
**Fig 3.** Techtile of a mutiphonic saxophone tone



**Fig 4.** *Max entropy* texture map of Fig 3.



**Fig. 5.** 595 x 413 part (top left) of the textile of Fig 2. The red squares show the last ten techtiles rendered by the granulator.



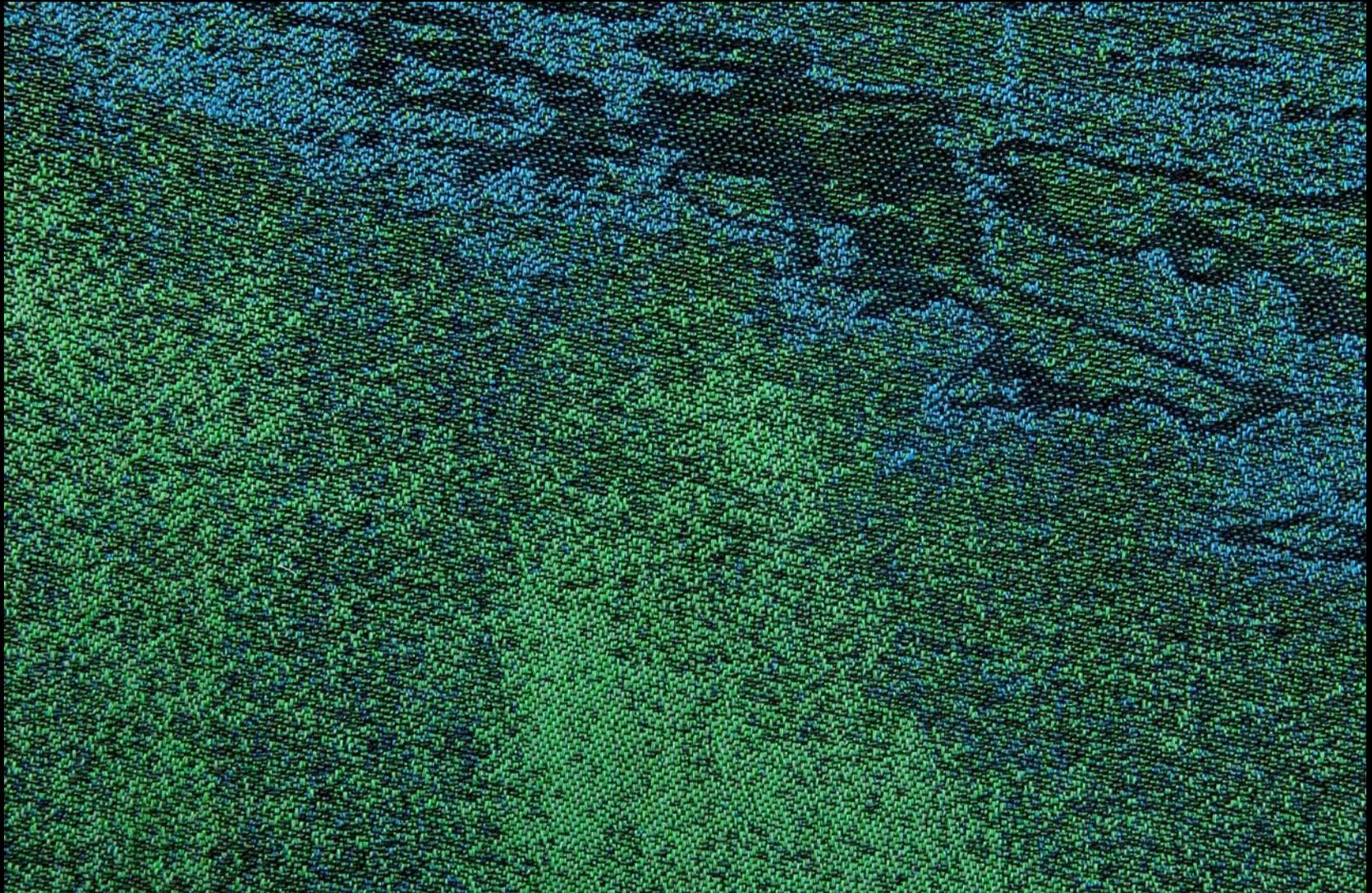
**Fig 6.** What the swarm sees when flying above the textile of Fig 5. Particles (red and blue discs) position attractors (boxes) on regions of high entropy.



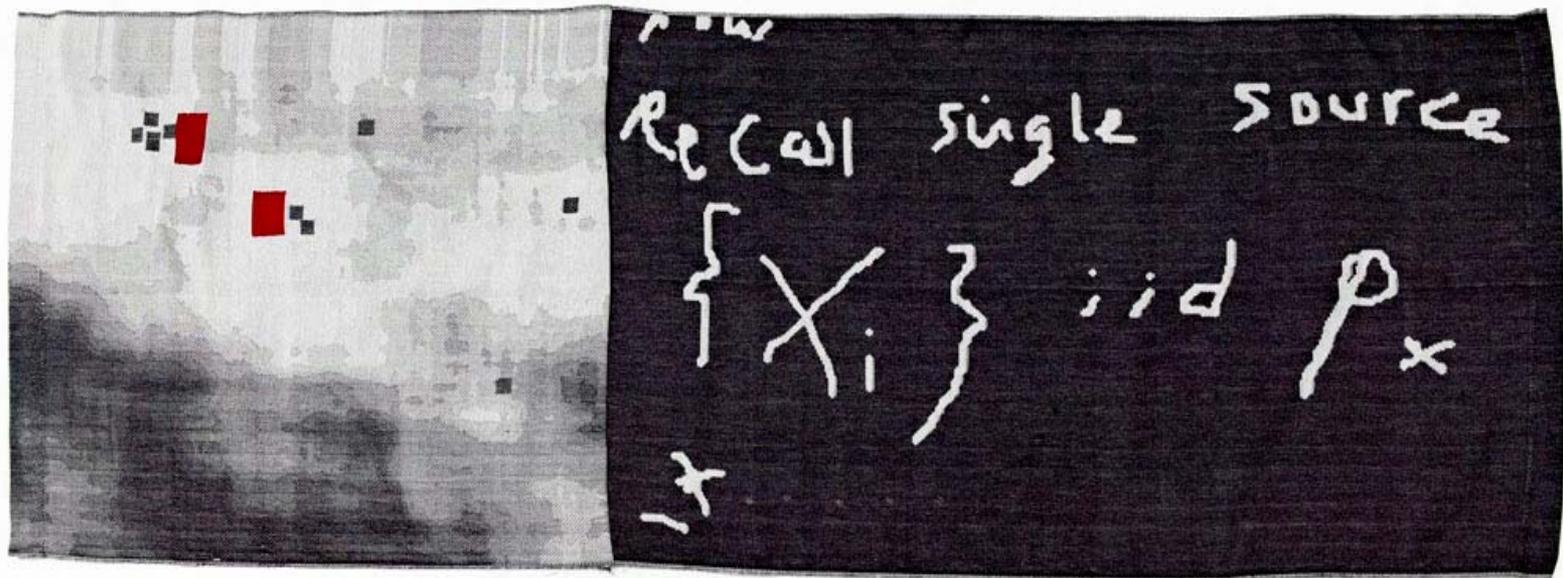
Janis Jefferies Uniform and Laundry (Restaged 1) 2000

180x80cm

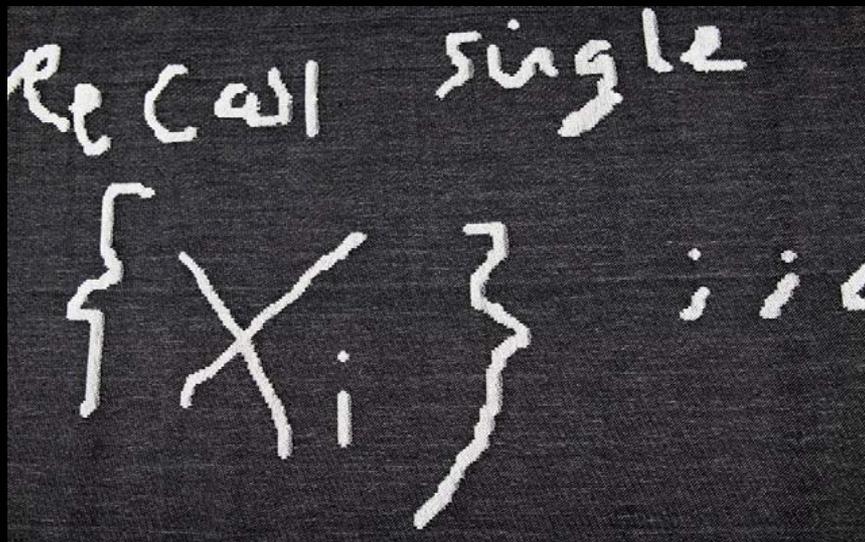
Woven at the Centre for Contemporary Textiles, Montreal from a digitally composed print via jacquard



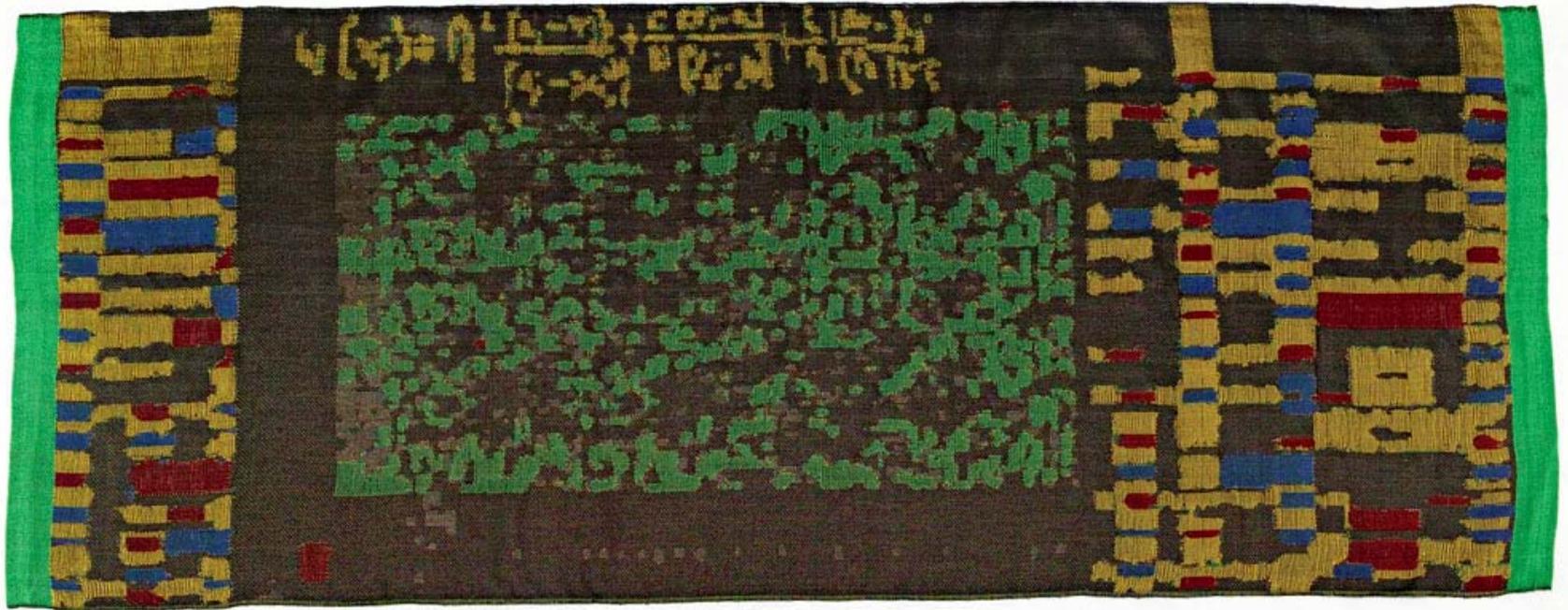
Janis Jefferies detail of Uniform and Laundry (Restaged 1)  
and used by Tim Blackwell for the beginning of our Tech Tiles project 2004.



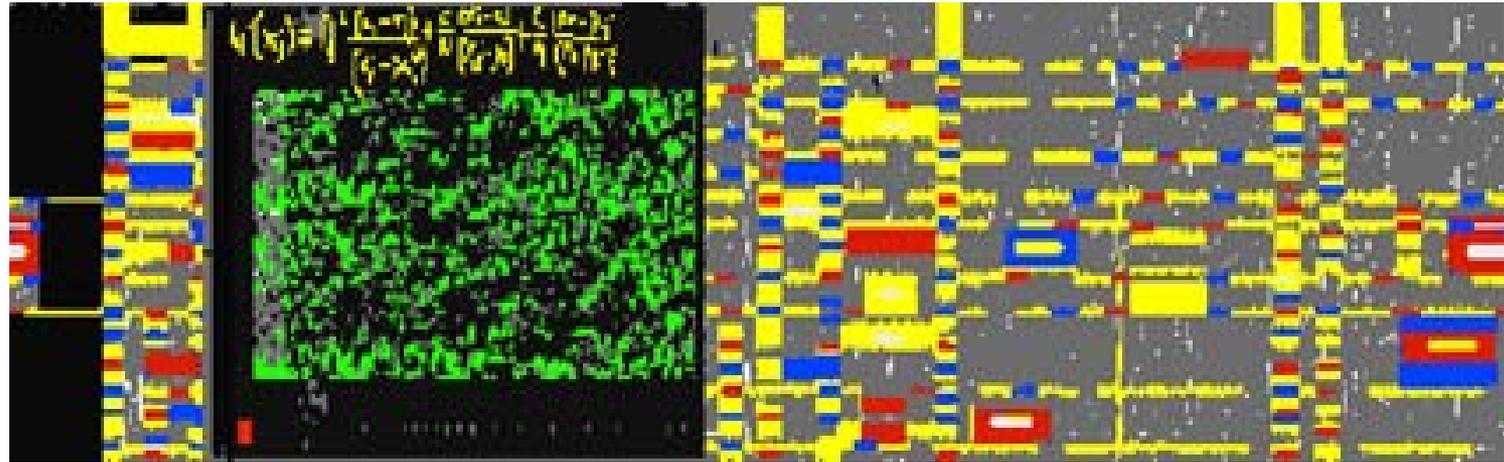
Janis Jefferies Source the Code is a cotton, twill brocade jacquard that collages Swarm Tech-tile project (Tim Blackwell/Janis Jefferies: Ave Maria performance of 18<sup>th</sup> March 2005) with MIT blackboard source code. 1 metre wide x 94 cm August\_ October 2005. Produced at the Centre for Textiles, Montreal.0



Janis Jefferies details from Source the Code currently on show as part of About Jacquard exhibition, Centre for Contemporary Textiles Montreal



Janis Jefferies Ave Maria (2002) meets Broadway Boogie Woogie (1943-43)  
Teacquete jacquard 70x150cm, produced at the Centre for Contemporary Textiles, Montreal



Janis Jefferies top is the sketch version of Ave Maria (2005) meets Mondrian, Broadway Boogie Woogie (1942-43) August 2005. This work is a take on Mondrian's painting - the material reading from a cross-sensory digital process that also includes code used by Tim Blackwell for Swarm Tech-Textiles Details of weave