ALLÉGORIES

Instrumentation :

Flûte (+ petite flûte)
Clarinette en si bémol
Cor
Violon
Violoncelle
Percussions (un exécutant, voir liste plus bas)
Dispositif de synthèse (un joueur de clavier + un technicien, voir plus bas)

Le cor et la clarinette sont transposés dans la partition d'orchestre.
Le jeu de timbres sonne deux octaves plus haut.

Liste des percussions :

Jeu de timbres (2 octaves plus haut)
Vibraphone
Tam-tam grave
3 Cymbales suspendues : grave, moyenne, aiguë
Cymbale chinoise
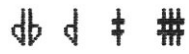5 Blocs chinois
Guiro long, sur pied
Maracas graves
2 Triangles
Metal chimes (doivent fournir une grappe de sons très aigus, non tempérés)
Grosse caisse symphonique (son très profond)

Symboles

Accidents :

db d ǂ #

- 3/4, -1/4, + 1/4, +3/4 de ton

Flûte et clarinette :

↑# ↑

hausser le son, au moins d' 1/8 de ton, si possible d'1/4 de ton

↓# ↓

baisser le son, au moins d'1/8 ton, si possible d'1/4 de ton

Violoncelle et synthétiseur :

↑# ↑

1/8 de ton plus haut
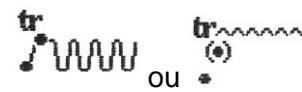
↓# ↓

1/8 de ton plus bas

- Les accidents valent pour une seule battue (et non pour une mesure entière). Toutefois, le plus souvent, chaque note porte son accident, sauf dans les cas évidents (notes répétées, notes réunies par une ligature, formules répétitives ou symétriques). Les accidents ne sont jamais valables pour une note de même nom située à une octave différente.

Autres symboles

ø

le moins fort possible (si possible, sans attaque)

ø ⊂ *p* ⊂ *f*

de rien à *p* puis de *p* à *f* (sans dim. intermédiaire)

tr ∿∿∿   tr∿∿∿
♪∿∿∿ ou ♪(•)

trille entre les deux notes indiquées

- Les deux notes ne sont pas nécessairement conjointes : ♪WWW ou tr∿∿∿ ♪(•)

trémolo (cordes et percussions) ou flatterzung

passer du son lisse au trémolo (ou au flz)

cesser le trémolo (ou le flz)

ralentir le trémolo, jusqu'au son lisse

respirations : normale, très courte

points d'orgue : long, moyen, court

noire de triolet, croche de triolet, et silences correspondants (notation utilisée dans les "mesures fractionnelles")

Symboles particuliers

Cordes

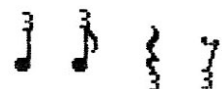|	
nv	non vibrato
sp	sul ponticello
asp	très près sur le chevalet, de telle sorte qu'on perçoive plus les harmoniques que le fondamental
st	sur la touche
$\longrightarrow sp$	aller progressivement vers le chevalet
ord	retour au jeu ordinaire
⌒	exagérer la pression de l'archet sur la corde, pour un obtenir un son bruiteux sonnant environ une octave plus bas
$\longrightarrow$ ⌒	accroître progressivement la pression d'archet
	retour à la pression normale

- Les cordes doivent jouer avec un vibrato normal, en l'absence d'indication contraire. Les traits horizontaux ne sont que des indications de durée.

Percussion

ou lr ⌣	laisser résonner jusqu'à extinction du son (ou jusqu'à une éventuelle indication de pédale ou d'étouffement)
⊞	étouffer
Ped	vibraphone : garder le pédale jusqu'à l'indication de pédale suivante, ou jusqu'au signe *

- Toujours laisser résonner jusqu'à extinction naturelle du son le jeu de timbres et les percussions métalliques, sauf indication contraire.

Flûte

↷	"Couvrir" (pour baisser le son d'environ 1/4 de ton)
↶	"Découvrir" (pour monter le son d'environ 1/4 de ton)

- Jouer avec un vibrato normal

Notation rythmique

Sur la partition, chaque temps est représenté par un trait léger, tandis que les mesures sont séparées par des traits forts. Sur les parties d'orchestre, les temps sont représentés seulement quand c'est nécessaire, par des traits légers ou des pointillés.

L'unité de base est la **noire**. Les sons tenus sont souvent représentés par des traits horizontaux prolongeant la note.

Les mesures notées **2**, **3**, **4**, etc... sont des mesures comportant 2, 3, 4,... noires.
1/2 , **2/3**, **4/3** , etc... indiquent des fractions de noire, soit des temps d'une durée égale à respectivement : une croche, deux croches de triolet, quatre croches de triolet, etc...

Exemples :
3 + 1/2   représente une mesure à quatre temps inégaux, soit : noire - noire - noire-croche
2/3 + 2   = trois temps : 2 croches de triolet - noire - noire

Le signe ᗰ indique une mesure "libre", à l'intérieur de laquelle le chef donnera quelques signes, en suivant la répartition graphique des événements.

ALLEGORIES

Max-MSP Version
December 1999

This new version replaces the former version which used a TX816 Yamaha for real-time synthesis. Here, the real-time synthesis system has been replaced by sound files, which are stored on the hard disk of a Macintosh computer and are read with the help a Max-MSP patch.
The sound files are triggered by a musician who plays a MIDI keyboard on stage.

EQUIPMENT

MIDI keyboard – 5 octaves (C1 – C6) minimum - easy program changes (1 to 16) – optional sustain pedal

Macintosh computer - MIDI Interface

Software Max MSP

Reverberation unit (optional, depending on the acoustics of the hall)

Mixer with effect send, and auxiliary output for the monitors

Stereo amplification (2 loud -speakers)

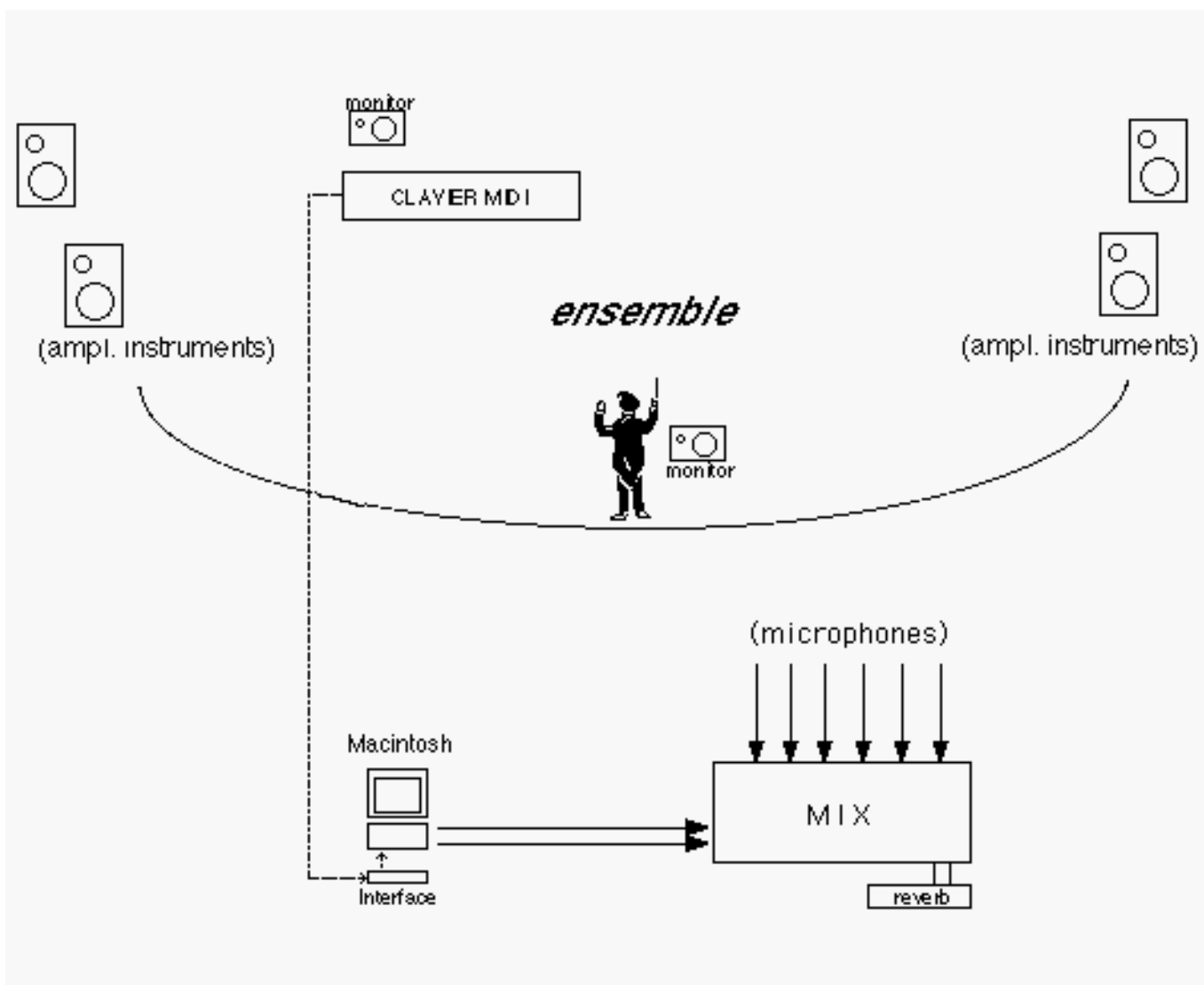**2 Stage monitors**

optional :
amplification of the instruments
   6 microphones
   Mixer 12 x 4 with 2 effect sends, auxiliary output for the monitors
   2 other loud-speakers
   a second reverb. unit

monitor

CLAVER MIDI

ensemble

(ampl. instruments)

(ampl. instruments)

monitor

(microphones)

Macintosh

MIX

Interface

reverb

Loading the program

De-fragment the hard disk and disable all unnecessary extensions.
Allow a minimum of 30 Mb for Max.

Copy the entire Allégories folder from the CD-ROM onto the hard disk.

Don't modify the file organization inside this folder.
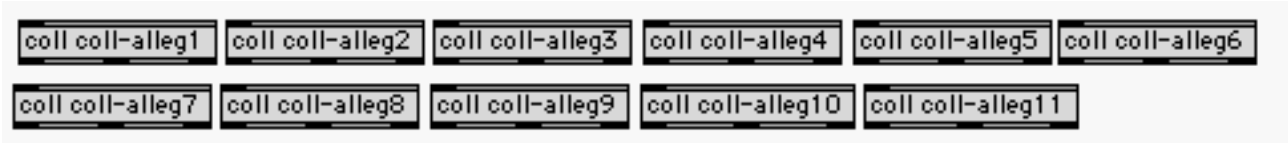
Launch the program Allégories.max.

All the sound files will automatically be opened. The program is now ready to work.

Organization of the sound files

The sounds are stored in 11 sound files. The sound files (**pgm1**, **pgm2**, …, **pgm11**) are selected by corresponding MIDI program changes (1 to 11). Program change 16 allows to play an A 440 for tuning.

Each sound file contains all the sounds necessary to the performance of a part of the piece. For instance, sections **a** and **b** of the piece use program n°1, corresponding to sound file **pgm1**. Section **c** uses program n°2, corresponding to sound file **pgm2**, etc…

Within each sound file, the sounds to be played are stored one after the other, in the order of the MIDI notes which are used to trigger them. The patch "knows" where they are located inside the sound file, thanks to the cues which are stored in the **coll** objects (one coll per sound file/program) :

The ProTool sessions which were used to create the sound files are copied on the second CD-Rom (Allégories – ProTools), in case there is any problem with the sounds. The time cues in the coll objects strictly correspond to the time cues of the regions in the ProTool session (don't move the regions if you have to make a new "bounce" !).

The sounds are designated by the program number, followed by the triggering MIDI note, ie 3-60 is the sound triggered by C3 in program 3.

The coll objects

They contain all the information needed to play each sound properly. Here is the inside of the coll **coll-alleg1** (beginning only) :

```
48, 0 10000 80 0;
49, 10000 20000 80 0;
50, 20000 33000 80 0;
51, 33000 45000 80 0;
52, 45000 56000 80 0;
53, 56000 65000 80 0;
54, 65000 74000 80 0;
56, 74000 83000 80 0;
59, 83000 92000 80 0;
60, 92000 101000 80 0;
```

The first number is the MIDI code of the triggering note.
The second and third numbers indicate the beginning and the end of the sound inside the sound file, in milliseconds (do not change !).
The fourth number indicates the amplitude with which the sound will be played, on a scale 0 to 100; ie, 100 will multiply the amplitude of the sound file by 1, 50 will multiply it by 0.5, etc… The amplitudes are all scaled by a factor 0.8 (= 80 in the coll), by default in the coll objects, but this can be changed if necessary.
The last number gives a delay after which the sound will be actually triggered (milliseconds). This was necessary to make the new version compatible with the old one, without having to change the score. Delays also can be changed if necessary.

MIDI connections

The patch is set to receive MIDI on all channels. This can be changed by double-clicking on thee three boxes :
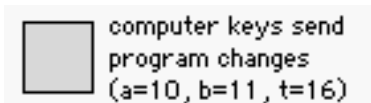
notein | pgmin | ctlin 64

Program changes

Normally, they are effectuated by the keyboard player. They can also be triggered from the computer, clicking on one of those boxes :

program changes 1 2 3 4 5 6 7 8 9 10 11 16 tune

or by hitting the numerical keys, but you will have first to enable this by clicking here :

computer keys send program changes (a=10, b=11, t=16)

Some keyboards do not have convenient program change controls. For this reason, it is also possible to use the lower part of the keyboard to

change the programs. This also has to be enabled :

keys C0 to A#0 send program changes

keys C1 to A#1 send program changes

Control of amplitude

The amplitude of the electronic sounds can be controlled in three ways:

- using the mixer, to get the best balance at each instant (see below)

- with the MIDI velocities: the keyboard player can trigger each sound with more or less power. In some parts of the piece, it is necessary to do so. For instance , the sound 10-65 (ie F3 in program 10), is played first *forte* in bar 33, section o, then *piano* in bar 1, section p. It may be necessary to adjust the response of the patch to the velocity emitted by the keyboard, as each type of keyboard has a different behavior. You can do so by adjusting the MIDI-velocity-to amplitude correspondance parameters:

MIDI velocities   127 -------> 1.2 amplitude
                   1   -------> 0.2 scaling

You can verify the result by watching these number boxes :

velocity amp
received scaling
48   0.573

- if it appears that there is too much difference in intensity between some of the sounds, it is also possible to modify their amplitude scaling inside the coll objects (see above).

Keyboard part

The keyboard part only consists in triggering the sounds, and does not require any particular knowledge of computers or synthesizers from the player.
There is no direct relationship between the notes played on the keyboard and the effect, which is notated, sometimes precisely, sometimes symbolically, in the 4 upper staves of the score.

Program changes

They are indicated by a number in a box : 11 .
Program **16** can be used to give an A to the players.

Synchronization
Most of the time, the synthesizer just has to follow the conductor, like any other instrument. However, certain sounds contain rhythmical elements. In this case, the conductor must synchronize his beat on these short rhythmic fragments (examples: a 49, o 27).

Interpretation
As seen above, the "velocity" (strength used in hitting the keys) has some influence on the amplitude of the electronic sounds, and allows some flexibility in the interpretation.

How to read the score (very important !)

The present score was designed for the TX816 version. During the transfer to the new system, it was tried to minimize the changes in the score, so that the two versions be as compatible as possible. However, a number of actions precedently necessary can now be ignored.

- all "normal" notes , ie notes with a black round head, must be played as they are written
2 exceptions : notes 10-49 and 10-52 (E2 , bar 10, and C#2, bar 12, in section p) must now be played right on the next beat, and not as an upbeat.

- tenuto symbols
In section a, a few notes are followed by a tenuto line, meaning you have to sustain the key during the indicated time. This has still to be performed for note 1-94 (the high B flat). It is no longer effective for the other notes, though it won't do any harm…

- it is no longer necessary to play the white square notes. They triggered changes of parameters of the synthesis in the TX816 version.
one exception : you must play note 9-91 (the high G of bar 23, section n). This special note will not trigger a sound, but will interrupt the trill of the previous bar.

- You never have to play notes or program changes which are indicated in parenthesis or brackets.

Delays

Some events will sound after a delay, either to simplify the performance, or because it was necessary in the TX816 version (to perform pre-calculations). Except for the two notes mentioned above, this has not been changed in the new version, even though those delays are no longer necessary in most cases. If for some reason, the delays seem wrong, or if the conductor and the player prefer to trigger the sounds at their right place, it is possible to modify these delays, by changing them in the coll objects (see above).

Sound projection

One of the musical intentions of this piece consists in obtaining a perfect fusion between synthetic and instrumental sounds.
For this reason, it is necessary to adjust the level of the electronic part throughout the performance, in order to get a perfect balance at each instant.
This balance is partly pre-programmed, since the sounds have been recorded at variable levels, but, according to the acoustics of the hall and to the PA system, it may be necesssary to adjust the volume of the electronics at certain moments.
Boosting a little the bass frequencies may be desirable, since the synthesis was in fact effectuated on a Yamaha FM synthesizer – and this type of synthesis is sometimes a little too light on the basses.
In dry acoustics, it may be useful to lightly reverberate the synthetic sounds.
In a large hall, or in a very dry one, the instruments should be slightly amplified, and possibly, reverberated, in order to achieve a better fusion with the electronics. In this case, the instruments should be not amplified on the same loud-speakers used for the electronics.

In the score, specific symbols were used to give directions concerning the sound projection. These symbols were in fact destinated to the TX816 version:

| $\boxed{<}$ | reinforce volume | $\boxed{\ll}$ | reinforce more |

| $\boxed{>}$ | diminish volume | $\boxed{\gg}$ | diminish more |

| $\boxed{=}$ | average level |

The letters *g* and *d* referred to the left (gauche) and right (droite) parts of the TX816. This is no longer relevant.

In the Max-MSP version, it is no longer necessary to follow these indications. However, they may give general directions as to the desired effect.

ALLÉGORIES

Tristan MURAIL

3" 3" **1** ♩ = 67 3,5" 4 - 5"

effet

ag 1

aj 1

g

ø

MF 0,16

d

ø

Synthétiseur

1

action

I **a**

Flûte

tr

ff

9

Clarinette en si♭

tr

ff

Cor (en fa)

f *pp* *f*

Violon

ff

ø

Violoncelle

ff

7

ø

Tam-tam grave

étouffer au centre (laisser sonner les composantes aigües)

Percussion

ø *mf*

28 228 H.L.

1 ♩ = 67