

# MIT Media Laboratory

## 4.889 Intelligent Interface Software Design Workshop (Spring 1993)

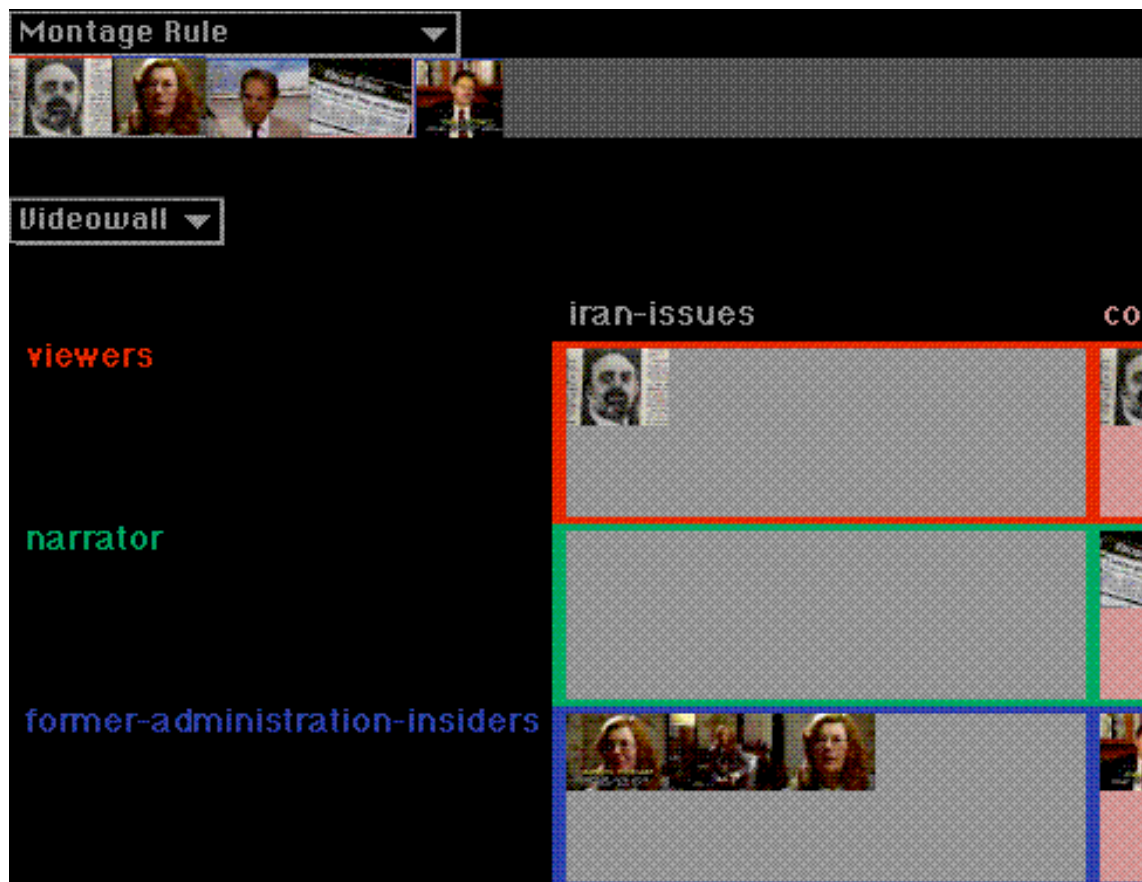
### Project 4: Splicer: An Intelligent Video Editor

#### Objective

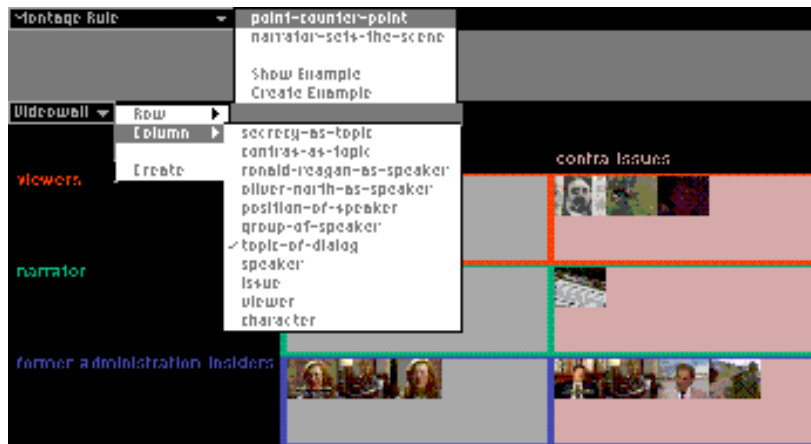
The objective of this project is to gain some experience with intelligent video editing systems, work with interactive video presentation interfaces, rule-based systems, narrative structures and representation of video content. You will be making extensions to **Splicer**, a system designed by Warren Sack and Abbe Don.

#### Splicer

The system consists of two parts: An interface for presentation of a knowledge base of video clips, called the **VideoWall**, and **Montage Rules** for automatically putting together video sequences.



There are about 50 clips, digitized with Quicktime, that deal with the Iran-Contra hearings. The clips present a variety of points of view, both the positions of the US government, and of those who criticize it for the incident. Each clip is annotated with information describing who is speaking, the topic, and other information. Rules can be written in a Prolog-like language to compose sequences of clips. You will write new rules and annotations for the existing material, and make extensions to the interface.



**VideoWall** The VideoWall is a spreadsheet-like grid that contains rows and columns that present a collection of video clips, characterized according to different relations. You may pick relations for the rows and columns from the VideoWall menu. The **Create** operation causes a new VideoWall to be computed with the currently selected row and column relations. The new VideoWall automatically sizes the cells according to the number of clips retrieved for that relation by the VideoWall rules.

Each clip may be played by clicking on it. Double-click starts the clip, single-click stops.

**Knowledge bases** It is worth noting that VideoWall is unlike a spreadsheet or database in that the relations need not be indexed in advance explicitly in the data. The clips that are retrieved to fill each cell are computed by Prolog-like rules at the time the VideoWall is requested, and can be inferred from existing annotations. New relations can be added at any time by writing new rules.

**Montage rule menu** The **Montage Rule** menu contains a list of rules for assembling clips into a sequence. You may pick an initial clip and a rule and the system can apply that rule to create a sequence starting with that clip.

The results of the rule application are displayed in the **Montage Rule Bar**, as a series of icons, each representing a single clip. A Quicktime viewer centered at the top allows the sequence to be played in its entirety.

**Montage examples** The system stores examples of applications of the montage rules. Initially, there are no stored examples, but as you create examples, you can browse through the set of existing examples.

## Understand how Splicer works

First, play with the interface to get a feel for how it works. Create some different VideoWalls by playing with the VideoWall menu. Choose some different relations for the rows and columns. Note how the layout changes according to what is retrieved. Play the clips in the cells. Can you understand the categorizations of the clips?

[You may have to know something about the Iran-Contra story to understand the clips out of context. If you are unfamiliar with the background of the Iran-Contra story, we can supply you with a short reading.]

Play with the Montage Rule menu. For each rule, try it with a variety of initial clips. Can you understand how the sequences are being put together?

### Annotating clips

Annotations for the clips are stored in the file **Annotations.Lisp**. The **defclip** macro creates an annotation for each clip. Look at some clips, then find their annotations to see what information the system stores about them.

Though the syntax is similar to CLOS, each of the "slots" expands into a Prolog assertion. The slot name is a Prolog predicate.

If you are not familiar with Prolog, or the idea of Logic Programming, you may want to read the chapter on Prolog in **Introduction to Artificial Intelligence Programming by Peter Norvig**. We can also suggest other references for Prolog.

Try some examples of retrieving information from the annotations.

```
(?- (speaker ?Clip-Name (Oliver North))
```

retrieves the names of all clips in which North is speaking.

### Taxonomy

The rules that describe the hierarchy of concepts used in the annotations resides in the file **Taxonomy.Lisp**. This describes, for example, which people are members of groups that have a defined role in the affair, or share a common outlook. Relate the taxonomic rules to the information in the annotations of the clips.

Practice some retrievals that exercise the taxonomic rules.

```
(?- (and
      (speaker ?Clip-Name ?Speaker)
      (member-of
       ?Speaker
       (Former administration insiders))))
```

finds all clips where former administrations insiders are speaking.

### VideoWall Rules

To see how the VideoWall works, we will trace a VideoWall rule.

Create the VideoWall that has **group-of-speaker** as the row relation, and **topic-of-dialog** as the column relation.

Trace the predicate

```
(trace topic-of-dialog/2)
```

[The /2 refers to the fact that this predicate takes 2 arguments, and must be mentioned when you turn on the trace].

Now do the query

```
(?- (and (topic-of-dialog ?Clip Contra-Issues)
         (group-of-speaker ?Clip Viewers)))
```

to see how the VideoWall finds the clips to fill in the cell indexed by Contra-Issues and Viewers.

Try tracing **group-of-speaker** and issue the same query. Try it with other cells.

## Montage Rules

The Montage Rules are stored in the file **Plot-Segments1.Lisp**. Look at the rule **point-counter-point**. Understand how it works, and trace an example as we did with VideoWall to watch how it works.

## Task: Extending Splicer

Write a new Montage Rule for Splicer. Trace an example as we did above. Make three or four example sequences with your new rule. Do the sequences produced fit together as well as you intended? Is the rule intelligible from watching the sequences?

Write some new annotations for the existing clips. Add a slot to the existing annotations that captures some other aspect of the material. Write some new taxonomy rules, and perhaps a new montage rule, that take advantage of the new annotations and make some sequences with it.

## Extend the interface

Critique the Splicer interface itself. Are there other ways in which you could graphically present the video material or annotations? Other ways in which a user might want to interact with it? Design a significant extension to the Splicer interface and implement it.

For example, you could imagine a hierarchical tree representation rather than a grid representation for presenting the collection of clips. You could use the object-oriented tree grapher in the Lisp **examples** folder to display a tree of video sequences. Is there some way in which you could graphically represent the rules or annotations themselves?

## Appendix: Rules

This appendix contains the code for the clip annotations, the topic taxonomy, the montage rules, and the video wall rules. All of this code is written in a modified version of Prolog. The modifications are mostly in the form of macros that allow one to more easily write clauses as structured data (see the clip annotations for some examples) and that define special semantics for specific kinds of rules (e.g., the rules for the video wall). This modified form of Prolog, the Quicktime video library, and the interface code has all been implemented in Common Lisp. The Common Lisp code is not listed below, but is available upon request.

The clip annotations describe who is speaking to whom about what in each of the video clips. The taxonomy of topics links the specific phrases contained in the dialog of the clips to more general and more specific topics. The montage rules describe abstract ways of sequencing the clips together to generate new videos composed of the existing clips. And, the video wall rules describe

specific ways of querying the database of clips so that they can be arranged in a gridded, "spreadsheet-like" format in the interface.

#### Clip Annotations

```
(defclip hakim1
:speaker (narrator)
:positions ((narrator) (sitcom star) (witch) (Samantha))
:issues ((albert hakim))
:viewers ((congress))
:characters ((albert hakim))
:dialog
(albert hakim)
:filename "hakim1")

(defclip honegger1
:speaker (Barbara Honegger)
:positions ((former white house policy analyst) (author))
:issues ((delay release of hostages)
(arms for hostages)
(secret meetings)
(deal with Khomeini))
:viewers ((narrator))
:characters ((George Bush) (Richard Allen) (Ronald Reagan) (Khomeini)
(Donald Greg))
:dialog
(the were two meetings that we know of for certain to date
that happened one in Washington DC and one in Paris\, France before
the
1980 election in October of 1980 where George Bush then
vice-presidential candidate and Richard Allen who became Reagan\'s
national security advisor Donald Greg who became Bush's national
security advisor and still is passed millions of dollars to the
Iranians to delay the release of our 52 hostages an additional 76 days
they met with an emissary of the Khomeini regime who offered a deal
that they thought Reagan and Bush could not refuse and that was we
will
delay the release of the 52 hostages if you will promise us all of the
arms that we could possibly want in the war against Iraq once you
become president of the United States)
:filename "honegger1")

(defclip narrator1
:speaker (Elizabeth Montgomery)
:positions ((narrator) (sitcom star) (witch) (Samantha))
:issues ((arms for hostages)
(secret meeting)
(middle-men)
(delay release of hostages))
:viewers ((narrator))
:characters ((George Bush) (Albuhassam Bonisadir) (Monicar Gorbanifer)
(Albert Hakim) (Reagan Bush campaign) (Israeli owned company))
:dialog
(the man who was the president of Iran during the hostage crisis was
Albuhassam Bonisadir he was later ousted in a coup and is now living in
exile in Paris Bonisadir supports the charges that a deal was made with
the Reagan-Bush campaign to delay the release of the hostages \. In a
recent interview he confirms that the Paris meeting took place and states
that George Bush was specifically identified as being at the meeting by
Iranian intelligence reports \. Also identified were Monicar Gorbanifer
```

\, Albert Hakim \, who later emerged as key middle-men in the Iran-Contra scandal as evidence of this agreement Bonisadir has made documents available showing written orders for shipment of American parts and weapons to Iran through an Israeli owned company)  
:filename "narrator1")

(defclip north1  
:speaker (Oliver North)  
:positions ((former national security council aide) (lieutenant colonel))  
:issues ((aid for contras))  
:viewers ((Congress))  
:characters ((William Casey) (Ayatollah Khomeini) (contras))  
:dialog  
(I must confess to you that I thought that using the Ayatollah's money to support the Nicaraguan resistance was the right idea \. I was not the only one who was enthusiastic about this idea \. Director Casey referred to it as the ultimate irony \, the ultimate covert operation)  
:filename "north1")

(defclip honegger2  
:speaker (Barbara Honegger)  
:positions ((former white house policy analyst) (author))  
:issues ((reagan bush support for iran)  
(prevent the spread of communism))  
:viewers ((narrator))  
:characters ((reagan-bush administration)  
(khomeini regime)  
(ronald reagan))  
:dialog  
(the Reagan-Bush administration \, right from the start \, right from the beginning \, behind the scenes has been an ally of the Khomeini regime because Ronald Reagan's number one fear is a Soviet invasion of Iran \. It's that simple)  
:filename "honegger2")

(defclip narrator2  
:speaker (Elizabeth Montgomery)  
:positions ((narrator) (sitcom star) (witch) (Samantha))  
:issues ((chain of command) (covert operators))  
:viewers ((congress))  
:characters ((theodore shackley) (george bush) (thomas clines)  
(rafael "chi chi" quintero) (John Singlaub)  
(Richard Secord) (albert hakim))  
:dialog  
(theodore shackley who was assistant deputy director of the operations for the  
central intelligence agency as of 1976 under george bush who was cia director at the time thomas clines who worked as a case officer under shackley in miami and in laos rafael "chi chi" quintero an anti-Castro Cuban who worked under Clines and was allegedly recruited by the cia as an assassin\; General John Singlaub who worked with Shackley and Clines in Vietnam and was in charge of the cia special operations over the border into Laos \; General Richard Secord who supervised the air operations into Laos and was later assigned to the Pentagon where he was put in charge of arms sales to Iran \; Albert Hakim who was a salesman for US weapons companies and a middle-man in the Iran-Contra affair)

```

.filename "narrator2")

(defclip sheehan1
 :speaker (Daniel Sheehan)
 :positions ((lawyer) (director of Christic Institute))
 :issues ((contras))
 :viewers ((narrator))
 :characters ((contras))
 :dialog
 (not an indigenous force inside Nicaragua that had any support from any of
 the
   population in Nicaragau it was a total artifice created by these men )
 :filename "sheehan1")

(defclip secord1
 :speaker (Elizabeth Montgomery)
 :positions ((retired general) (businessman))
 :issues ((richard secord))
 :viewers ((congress))
 :characters ((richard secord))
 :dialog
 (general secord)
 :filename "secord1")

(defclip north2
 :speaker (oliver north)
 :positions ((former national security council aide) (lieutenant colonel))
 :issues ((contras))
 :viewers ((congress))
 :characters ((contras) (sandinistas))
 :dialog
 (these are young men and women who gave up everything they had and
 they fled a
   totalitarian communist regime and they fled to another country because
   they could no longer live in the one they had been born in and they took
   up arms I didn't create the Nicaraguan contra or the Nicaraguan
 freedom
   fighter and the cia didn't create it the sandinistas created it)
 :filename "north2")

(defclip profscott1
 :speaker (peter dale scott)
 :positions ((professor))
 :issues ((covert operators) (reagan-bush campaign))
 :viewers ((narrator))
 :characters ((covert operators) (ronald reagan) (george bush))
 :dialog
 (When all these covert operators were fired in the 1970s\, they didn't just
 start opening restaurants or working in bookstores they were poeple who
 were very skilled in covert manipulation of political process and they
 essentially ganged up to find and then elect a candidate who would put
 them back in the covert operations business and reagan and bush were
 only too eager to be that kind of candidate)
 :filename "profscott1")

(defclip reagan1
 :speaker (ronald reagan)
 :positions ((president))

```

:issues ((covert operators) (reagan-bush campaign))  
:viewers ((american public))  
:characters ((ronald reagan) (hostages))  
:dialog  
(A few months ago I told the American People I did not trade for hostages  
my  
heart and my best intentions still tell me that's true but the facts and  
the evidence tell me it is not)  
:filename "reagan1")

(defclip north3  
:speaker (oliver north)  
:positions ((former national security council aide) (lieutenant colonel))  
:issues ((residuals from arms sales) (meeting with Gorbanifar)  
(support of the Nicaraguan resistance))  
:viewers ((congress))  
:characters ((Gorbanifar) (Oliver North) (contras))  
:dialog  
(Mr Gorbanifar took me into the bathroom and Mr Gorbanifar suggested  
several incentives to make that February transaction work and  
the attraction \. \. \. attractive incentive for me was the one he  
made that residuals could flow to support the Nicaraguan resistance)  
:filename "north3")

(defclip chamorro1  
:speaker (edgar chamorro)  
:positions ((former contra leader) (cia employee))  
:issues ((contras tactics))  
:viewers ((narrator))  
:characters ((contras) (Nicaraguan civilians))  
:dialog  
(The tactics used by the contras were the tactics of terrorizing civilians )  
:filename "chamorro1")

(defclip chamorro2  
:speaker (edgar chamorro)  
:positions ((former contra leader) (cia employee))  
:issues ((deceiving the American people) (lying to Congress)  
(war in Nicaragua) (pressure on Nicaragua))  
:viewers ((narrator))  
:characters ((contras) (cia) (people from the white house)  
(united states) (nicaragua) (american people)  
(congress))  
:dialog  
(I became involved with the contras because the cia using people from  
the White House they invited me to be one of of the contra  
leaders \. I was told that this was just a war for a year  
that the united states wanted to put this pressure on Nicaragua  
but then after a year or so I found out that this was not the case  
We were being used to deceive the American people we were being used  
to lie to Congress to tell congress that the purpose was a good purpose  
to bring democracy \, but in private we were being told something different  
\. so I think this was big lie)  
:filename "chamorro2")

(defclip white1  
:speaker (robert white)  
:positions ((former ambassador to el salvador))

```

:issues ((overriding the constitution) (national security state))
:viewers ((narrator))
:characters ((national security agencies))
:dialog
(The exposure of the beginnings of a national security state which believes it
  has the right to override the constitution of the United states in the
  name of security)
:filename "white1")

(defclip honegger3
:speaker (Barbara Honegger)
:positions ((former white house policy analyst))
:issues ((cutting a deal with Iran) (Iran holding hostages))
:viewers ((narrator))
:characters ((Ronald Reagan)(52 hostages) (Iran))
:dialog
(Ronald Reagan cut a deal with Iran before the 1980 election to send arms
to
  Iran in exchange for Iran's agreeing to delay the releasing of our 52
  hostages)
:filename "honegger3")

(defclip honegger4
:speaker (Barbara Honegger)
:positions ((former white house policy analyst))
:issues ((october surprise) (panic in campaign) (bringing hostages home)
  (winning election) (eleven o'clock news))
:viewers ((narrator))
:characters ((Jimmy Carter) (hostages) (honegger))
:dialog
(As part of my position I was required to cover the eleven o'clock evening
news
  in the operations center\ . The campaign was afraid that Jimmy carter
would
  successfully bring the 52 hostages home\ , what we called the October
  surprise\ , and win the election\ . there had been a feeling of panic in the
  campaign\ .)
:filename "honegger4")

(defclip street1
:speaker (person 1 on street)
:positions ((person on street))
:issues ((television) (lying))
:viewers ((narrator))
:characters ((people on television))
:dialog
(that reason could be anything\ , I mean they could tell us anything on tv)
:filename "street1")

(defclip sarbanes-north1
:speaker (paul sarbanes)
:positions ((senator))
:issues ((authority for the operation) (superiors))
:viewers ((oliver north))
:characters ((oliver north)(richard second))
:dialog
(just trying to find out where the authorities were coming from to do these
  activities I mean clearly there was no congressional oversight over this

```

because it was kept totally hidden from the congress from whom would  
you have to get the green light in order to make the request or the  
direction I take it from second to move ahead)  
:filename "sarbanes1")

(defclip sarbanes-north2  
:speaker (oliver north)  
:positions ((former national security council aide) (lieutenant colonel))  
:issues ((authority for the operation) (superiors))  
:viewers ((paul sarbanes))  
:characters ((oliver north) (admiral poindexter) (william casey)  
(robert mcfarland))  
:dialog  
(well as I have testified senator I talked to director casey I talked to  
mr mcfarland I talked to admiral poindexter)  
:filename "sarbanes1")

(defclip street2  
:speaker (person 2 on the street)  
:positions ((person on the street))  
:issues ((contras) (lying))  
:viewers ((narrator))  
:characters ((reagan-bush administration) (oliver north))  
:dialog  
(they say it was to help the contras in Nicaragua but I don't believe  
that's true)  
:filename "street2")

(defclip north4  
:speaker (oliver north)  
:positions ((former national security council aide) (lieutenant colonel))  
:issues ((covert operations) (document shredding) (embarrassing evidence))  
:viewers ((congress) (american people))  
:characters ((oliver north))  
:dialog  
(I shredded \, I was never told not to shred I shredded because I thought  
it was the right thing to do when I didn't have a shredder I put it  
into a burn-bag and they burned \.  
weren't you going through your files to get rid of embarrassing evidence ?  
embarrassing no \, documents which would compromise the national  
security  
of the United States \, documents that would put lives at risk \,  
documents that would demonstrate a covert action under US direction  
and control and and relationship to it \, yes \. embarrassing ? no \.)  
:filename "north4")

(defclip hall1  
:speaker (faun hall)  
:positions ((former national security council aide) (administrative assistant))  
:issues ((coverup))  
:viewers ((congress) (american people))  
:characters ()  
:dialog  
(I don't us the word coverup I would use the word protect)  
:filename "hall1")

(defclip street3  
:speaker (person 3 on the street)

:positions ((person on the street))  
:issues ((lying))  
:viewers ((narrator))  
:characters ((reagan-bush administration) (oliver north))  
:dialog  
(they were lying about most everything)  
:filename "street3")

(defclip narrator3  
:speaker (Elizabeth Montgomery)  
:positions ((narrator) (sitcom star) (witch) (Samantha))  
:issues ((iran-contra hearings) (official explanations))  
:viewers ((television audience))  
:characters ((special joint committee of the united states congress))  
:dialog  
(the iran-contra hearings convened in may 1987 by a special joint committee  
of the united states congress to investigate the sale of us weapons to  
iran and the illegal diversion of money to the contras for thirteen  
weeks the hearings were broadcast on national television over thirty  
people testified and the committee issued a 700 page report describing  
its findings but there are still many questions which the select  
committee left unanswered and unexplored \. often \, the official  
explanation seemed inadequate and contradictory)  
:filename "narrator3")

(defclip street4  
:speaker (person 4 on the street)  
:positions ((person on the street))  
:issues ((iran))  
:viewers ((narrator))  
:characters ((us) (iran))  
:dialog  
(iran is a crucial economic \, geographic country the us wants to get them  
friendly again as quickly as possible)  
:filename "street4")

(defclip street5  
:speaker (person 5 on the street)  
:positions ((person on the street))  
:issues ((memory) (lobotomies))  
:viewers ((narrator))  
:characters ((witnesses at the iran-contra hearings))  
:dialog  
(they couldn't remember they all had lobotomies they nobody could  
remember  
anything \. talk about senility ! holy cow !)  
:filename "street5")

(defclip macmichael1  
:speaker (david macmichael)  
:positions ((former cia analyst))  
:issues ((pirates))  
:viewers ((narrator))  
:characters ((secret team))  
:dialog  
(these are modern day pirates these guys they have escaped essentially the  
control of national governments but they're available for use by  
national governments sometimes they move under color of and uh

defend themselves as advancing us national interests but i think  
that's very secondary with these guys \. they're out to make a buck)  
:filename "macmichael1")

(defclip street6  
:speaker (person 6 on the street)  
:positions ((person on the street))  
:issues ((free the hostages))  
:viewers ((narrator))  
:characters ((reagan-bush administration) (oliver north))  
:dialog  
(I really think their main focus was to free the hostages)  
:filename "street6")

(defclip clements1  
:speaker (marilyn clements)  
:positions ((representative of the center for constitutional rights))  
:issues ((coup))  
:viewers ((narrator))  
:characters ((secret team))  
:dialog  
(in any other country it would have been called a coup \, um \, and they  
seemed to have gotten away with it)  
:filename "cléments1")

(defclip street7  
:speaker (person 6 on the street)  
:positions ((person on the street) (same person as in clip street6))  
:issues ((iran-contra affair))  
:viewers ((narrator))  
:characters ((american people) (secret team))  
:dialog  
(there is a lot more to the story but whether or not we'll ever find out  
about it is another question)  
:filename "street7")

(defclip narrator4  
:speaker (Elizabeth Montgomery)  
:positions ((narrator) (sitcom star) (witch) (Samantha))  
:issues ((arms to iran) (illegal diversion of profits)  
(us support for the contras))  
:viewers ((television audience))  
:characters ((contras) (cia) (nicaraguan government) (iran))  
:dialog  
(it was further revealed that the arms to iran had been severely marked up  
some of the profits had been illegally diverted to support the contras \,  
a guerilla force organized by the cia fighting the nicaraguan government)  
:filename "narrator4")

(defclip north5  
:speaker (oliver north)  
:positions ((former national security council aide) (lieutenant colonel))  
:issues ((covert operations) (secrecy) (denial of a covert operation)  
(press coverage of covert operation))  
:viewers ((congress) (american people))  
:characters ((legal counsel to the house of representatives) (gorbanifar)  
(oliver north) (secret team) (us enemies) (daniel ortega)  
(congress))

```

:dialog
(even gorbaniyar knew that you were supporting the contras ?
  yes he did \. isvestia knew it \. it had been in the papers in moscow
  it had been all over danny ortega\'s newscastes \, radio havana
  was broadcasting it \. it was in every newspaper in the land \.
  all of our enemies knew it and you wanted to conceal it from the
  united states congress ?
  we wanted to be able to deny a covert operation)
:filename "north5")

(defclip north6
:speaker (oliver north)
:positions ((former national security council aide) (lieutenant colonel))
:issues ((iran-contra covert operation) (document shredding))
:viewers ((congress) (american people))
:characters ((oliver north))
:dialog
(I did do it \. I am not \, as I said in my statement \, at all ashamed of
  any of the things that I did \. I was given a mission and I tried to carry
  it out)
:filename "north6")

(defclip reagan2
:speaker (ronald reagan)
:positions ((president))
:issues ((covert operators))
:viewers ((american public))
:characters ((ronald reagan))
:dialog
(beyond \, that had been kept from me in various covert operations)
:filename "reagan2")

(defclip reagan3
:speaker (ronald reagan)
:positions ((president))
:issues ((arms for hostages) (government policy) (terrorists))
:viewers ((american public))
:characters ((terrorists) (hostages) (our government))
:dialog
(our government has a firm policy \, not to capitulate to terrorist demands \,
  that no concessions policy remains in force \, in spite of the widely
  speculative and false stories of our arms for hostages and alleged
  ransom payments we did not \, repeat \, did not \, trade weapons \,
  or anything else \, for hostages \, nor will we)
:filename "reagan3")

(defclip fascell1
:speaker (dante fascell)
:positions ((us representative from florida))
:issues ((shredding))
:viewers ((american public))
:characters ((us representatives))
:dialog
(I\'d hate to think as many of my colleagues here have already expressed
  themselves that in the process we have shredded our own democratic
  fabric)
:filename "fascell1")

```

```

(defclip brooks1
:speaker (jack brooks)
:positions ((us representative from texas))
:issues ((shadow government) (foreign affairs))
:viewers ((narrator))
:characters ((secret team) (jack brooks))
:dialog
(I think that ah there was a substantial shadow government trying to run
foreign affairs of the united states)
:filename "brooks1")

(defclip brooks2
:speaker (jack brooks)
:positions ((us representative from texas))
:issues ((shredding) (destruction of documents))
:viewers ((narrator))
:characters ((oliver north) (faun hall) (secret team) (jack brooks))
:dialog
(they systematically destroyed and shredded all of the documentation \, as
much as they could get \, hours of of shredding \, altered some of the
documents that remained \, stole what they couldn't shred \. now this
gives you an indication that there may be a few things that they did
that they didn't want the public to know)
:filename "brooks2")

(defclip stockwell1
:speaker (john stockwell)
:positions ((former cia covert specialist))
:issues ((secret sessions of the special joint committee of
the united states congress)
(cia) (illegal activities))
:viewers ((narrator))
:characters ((senator daniel inouye)
(chairman of special joint committee of the united states congress)
(special joint committee of the united states congress)
(cia))
:dialog
(anytime they got into anything that was really sensitive about exactly that
exactly what the cia's role was and exactly what laws were
broken and when they went into secret session which means that we
\, the people \, won't be \, you know \, we won't ever know \.
like you i don't wish to see secrets of this land inadvertently
and accidentally made public \. accordingly \, the panel will
enter into executive session)
:filename "stockwell1")

(defclip shredder
:speaker ()
:positions ()
:issues ((shredding))
:viewers ((narrator))
:characters ()
:dialog
()
:filename "shredder")

(defclip street8
:speaker (person 8 on the street)

```

```

:positions ((person on the street))
:issues ((lying))
:viewers ((narrator))
:characters ((witnesses at the iran-contra hearings))
:dialog
(i think they're under oath so i think they're telling the truth)
:filename "street8")

(defclip profscott2
:speaker (peter dale scott)
:positions ((professor))
:issues ((iran-contra hearings) (scale of covert operations)
(scandals and covert operations))
:viewers ((narrator))
:characters ((people on the committees) (reagan-bush administration)
(iran) (contras))
:dialog
(both uh the adminstration and the majority of the people in the committees
were frightened that the real scandals \, the drugs scandals \, for
example would really threaten the the any future conduct of covert
operations on the scale that they had been handled in the past and so
they were trying very deliberately to limit the damage \. this was
damage control \. look only at the iran arms sales and the alleged
diversions to the contras)
:filename "profscott2")

```

#### Taxonomy of Topics

```

;;; Main Topics in chronological order:

;;; 1. Reagan-Bush campaign arranges the delay of the release of the
hostages in Iran.

;;; 2. Iran agrees to delay the release of the hostages if the United States
agrees to sell arms to Iran.

;;; 3. US sells arms to Iran.

;;; 4. US uses profits from arms sales to Iran to support the Nicaraguan
contras.

;;; 5. Congress begins the Iran-Contra hearings.

;;; Topics

;;; 1. Hostages
;;; 2. Iran
;;; 3. Contras
;;; 4. Secrecy/Lying

(<- (topic hostages-issues (bringing hostages home)))
(<- (topic hostages-issues (cutting a deal with iran)))
(<- (topic hostages-issues (deal with khomeni)))
(<- (topic hostages-issues (delay release of hostages)))
(<- (topic hostages-issues (free the hostages)))
(<- (topic hostages-issues (iran holding hostages)))
(<- (topic hostages-issues (october surprise)))
(<- (topic hostages-issues (panic in campaign)))

```

(<- (topic hostages-issues (reagan-bush campaign)))  
 (<- (topic hostages-issues (winning election)))

(<- (topic iran-issues (cutting a deal with iran)))  
 (<- (topic iran-issues (deal with khomeni)))  
 (<- (topic iran-issues (iran)))  
 (<- (topic iran-issues (meeting with gorbanifar)))  
 (<- (topic iran-issues (reagan bush support for iran)))  
 (<- (topic iran-issues (residuals from arms sales)))

(<- (topic contra-issues (aid for contras)))  
 (<- (topic contra-issues (cia)))  
 (<- (topic contra-issues (contras tactics)))  
 (<- (topic contra-issues (contras)))  
 (<- (topic contra-issues (foreign affairs)))  
 (<- (topic contra-issues (pressure on nicaragua)))  
 (<- (topic contra-issues (prevent the spread of communism)))  
 (<- (topic contra-issues (support of the nicaraguan resistance)))  
 (<- (topic contra-issues (terrorists)))  
 (<- (topic contra-issues (us support for the contras)))  
 (<- (topic contra-issues (war in nicaragua)))

(<- (topic secrecy-issues (albert hakim)))  
 (<- (topic secrecy-issues (authority for the operation)))  
 (<- (topic secrecy-issues (chain of command)))  
 (<- (topic secrecy-issues (cia)))  
 (<- (topic secrecy-issues (coup)))  
 (<- (topic secrecy-issues (covert operations)))  
 (<- (topic secrecy-issues (covert operators)))  
 (<- (topic secrecy-issues (coverup)))  
 (<- (topic secrecy-issues (deceiving the american people)))  
 (<- (topic secrecy-issues (denial of a covert operation)))  
 (<- (topic secrecy-issues (destruction of documents)))  
 (<- (topic secrecy-issues (document shredding)))  
 (<- (topic secrecy-issues (eleven IO'CLOCKI news)))  
 (<- (topic secrecy-issues (embarrassing evidence)))  
 (<- (topic secrecy-issues (foreign affairs)))  
 (<- (topic secrecy-issues (government policy)))  
 (<- (topic secrecy-issues (illegal activities)))  
 (<- (topic secrecy-issues (illegal diversion of profits)))  
 (<- (topic secrecy-issues (iran-contra covert operation)))  
 (<- (topic secrecy-issues (iran-contra affair)))  
 (<- (topic secrecy-issues (iran-contra hearings)))  
 (<- (topic secrecy-issues (lobotomies)))  
 (<- (topic secrecy-issues (lying)))  
 (<- (topic secrecy-issues (lying to congress)))  
 (<- (topic secrecy-issues (memory)))  
 (<- (topic secrecy-issues (middle-men)))  
 (<- (topic secrecy-issues (national security state)))  
 (<- (topic secrecy-issues (official explanations)))  
 (<- (topic secrecy-issues (overriding the constitution)))  
 (<- (topic secrecy-issues (pirates)))  
 (<- (topic secrecy-issues (press coverage of covert operation)))  
 (<- (topic secrecy-issues (residuals from arms sales)))  
 (<- (topic secrecy-issues (richard second)))  
 (<- (topic secrecy-issues (scale of covert operations)))  
 (<- (topic secrecy-issues (scandals and covert operations)))  
 (<- (topic secrecy-issues (secrecy)))

```

(<- (topic secrecy-issues (secret sessions of the special joint committee of the
united states congress)))
(<- (topic secrecy-issues (secret meeting)))
(<- (topic secrecy-issues (secret meetings)))
(<- (topic secrecy-issues (shadow government)))
(<- (topic secrecy-issues (shredding)))
(<- (topic secrecy-issues (superiors)))

; groups

; Administration
(<- (group-member (ronald reagan) administration))
(<- (group-member (oliver north) administration))
(<- (group-member (faun hall) administration))

; Congress
(<- (group-member (jack brooks) congress))
(<- (group-member (paul sarbanes) congress))
(<- (group-member (dante fascell) congress))

; General Public
(<- (group-member (person 1 on street) general-public))
(<- (group-member (person 2 on street) general-public))
(<- (group-member (person 3 on street) general-public))
(<- (group-member (person 4 on street) general-public))
(<- (group-member (person 5 on street) general-public))
(<- (group-member (person 6 on street) general-public))
(<- (group-member (person 7 on street) general-public))
(<- (group-member (person 8 on street) general-public))

; Expert Witnesses
(<- (group-member (marilyn clements) expert-witnesses))
(<- (group-member (peter dale scott) expert-witnesses))
(<- (group-member (daniel sheehan) expert-witnesses))

; Former Administration Insiders
(<- (group-member (edgar chamorro) former-administration-insiders))
(<- (group-member (chamorro) former-administration-insiders))
(<- (group-member (barbara honegger) former-administration-insiders))
(<- (group-member (john stockwell) former-administration-insiders))
(<- (group-member (david macmichael) former-administration-insiders))
(<- (group-member (robert white) former-administration-insiders))

; Narrator
(<- (group-member (elizabeth montgomery) narrator))
(<- (group-member (narrator) narrator))

; Viewers
(<- (group-member (american people) viewers))
(<- (group-member (congress) viewers))
(<- (group-member (narrator) viewers))
(<- (group-member (oliver north) viewers))
(<- (group-member (paul sarbanes) viewers))
(<- (group-member (television audience) viewers))

; Adversaries
(<- (adversary administration congress))

```

```

(<- (adversary administration expert-witnesses))
(<- (adversary administration former-administration-insiders))

(<- (adversaries ?X ?Y) (adversary ?X ?Y) !)
(<- (adversaries ?X ?Y) (adversary ?Y ?X))

```

#### Montage Rules

```

(<- (member-wbt ?Item (?Item . ?Rest)))
(<- (member-wbt ?Item (?X . ?Rest))
    (member-wbt ?Item ?Rest))

(<-montage- (narrator-sets-the-scene ?NameOfStartClip ?FinalSequence)
    (issue ?NameOfStartClip ?Issue)
    (member-wbt ?Word ?Issue)
    (narrator-interviewee-couplets ?Word () ?FinalSequence))

(<- (narrator-interviewee-couplets ?Word ?SequenceSoFar ?FinalSequence)
    (narrator-clip ?Word ?NarratorClip)
    (not (member ?NarratorClip ?SequenceSoFar))
    (interviewee-clip ?Word ?IntervieweeClip)
    (not (member ?IntervieweeClip ?SequenceSoFar))
    (append ?SequenceSoFar (?NarratorClip ?IntervieweeClip)
    ?NextSequenceSoFar)
    (narrator-interviewee-couplets ?TopicOfNarratorClip
    ?NextSequenceSoFar ?FinalSequence)
    !))
(<- (narrator-interviewee-couplets ?Word ?FinalSequence ?FinalSequence))

(<- (speaker-is-narrator ?Clip ?Narrator)
    (speaker ?Clip (narrator)))
(<- (speaker-is-narrator ?Clip ?Narrator)
    (speaker ?Clip (elizabeth montgomery)))

(<- (narrator-clip ?Word ?NarratorClip)
    (speaker-is-narrator ?NarratorClip ?Narrator)
    (issue ?NarratorClip ?IssueOfNarratorClip)
    (member-wbt ?Word ?IssueOfNarratorClip))

(<- (interviewee-clip ?Word ?IntervieweeClip)
    (speaker ?IntervieweeClip ?Speaker)
    (issue ?IntervieweeClip ?IssueOfIntervieweeClip)
    (member-wbt ?Word ?IssueOfIntervieweeClip)
    (not (= ?Speaker (narrator))))

(<-montage- (point-counter-point ?NameOfStartClip ?FinalSequence)
    (issue ?NameOfStartClip ?IssueOfStartClip)
    (topic ?Topic ?IssueOfStartClip)
    (point-counter-point ?Topic ?NameOfStartClip
    (?NameOfStartClip)
    ?FinalSequence))

(<- (point-counter-point ?Topic ?NameOfClip ?SequenceSoFar
    ?FinalSequence)
    (counter-point-clip ?Topic ?NameOfClip ?NameOfNextClip)
    (not (member ?NameOfNextClip ?SequenceSoFar))
    (append ?SequenceSoFar (?NameOfNextClip) ?NextSequenceSoFar)
    (point-counter-point ?Topic ?NameOfNextClip ?NextSequenceSoFar
    ?FinalSequence))

```

!)

```
(<- (point-counter-point ?Topic ?NameOfClip ?FinalSequence
?FinalSequence))

(<- (counter-point-clip ?Topic ?NameOfClip ?NameOfCounterClip)
(issue ?NameOfCounterClip ?Issue)
(topic ?Topic ?Issue)
(speaker ?NameOfClip ?SpeakerInClip)
(speaker ?NameOfCounterClip ?SpeakerInCounterClip)
(group-member ?SpeakerInClip ?GroupNameForClip)
(group-member ?SpeakerInCounterClip ?GroupNameForCounterClip)
(adversaries ?GroupNameForClip ?GroupNameForCounterClip))
```

Video Wall Rules

```
(<-vw- (topic-of-dialog ?ClipName ?Topic)
(issue ?ClipName ?Issue)
(topic ?Topic ?Issue))
```

; issue

```
(<-vw- (group-of-speaker ?ClipName ?Group)
(group-member ?Individual ?Group)
(speaker ?ClipName ?Individual))
```

```
(<-vw- (position-of-speaker ?ClipName ?Position)
(speaker ?ClipName ?Individual)
(position ?Individual ?Position))
```

; character

; viewer

```
(<-vw- (oliver-north-as-speaker ?ClipName (oliver north))
(speaker ?ClipName (oliver north)))
```

```
(<-vw- (ronald-reagan-as-speaker ?ClipName (ronald reagan))
(speaker ?ClipName (ronald reagan)))
```

```
(<-vw- (contras-as-topic ?ClipName contra-issues)
(topic-of-dialog ?ClipName contra-issues))
```

```
(<-vw- (secrecy-as-topic ?ClipName secrecy-issues)
(topic-of-dialog ?ClipName secrecy-issues))
```