# Inform and the Writing Process

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#### What Is Inform?

#### Formerly Known as Inform 7

- A Computer Language (An Artificial Logical Language).
- A Tool For Writing Interactive Stories.
- A Way of Applying and Sharpening Our Use of "Natural" English Sentences and Paragraphs.



### Why Teach a Computer Language?

- Advantages of Input
  - Vocabulary for Thinking
  - Enforcement of Clarity
  - Learning Local Patterns
  - Learning Fallacies
- Advantages of Output Depend on the Language.



### Input – Source Code and Vocabulary for Thinking

- Arguments in Logic
  - Premises
  - Conclusions
  - If (Premise), then (Conclusion)
- Instead
- Before
- After
- And
- Or



## Input – Source Code and Clarity

- Must "Compile"
- Won't Compile Without
  - Clarity
  - Precision



### Input – Source Code and Logical Patterns

- If
  - Is "If A then B" the same as "If B then A"?
    - If this shirt is a particularly blue item, must it be true that a particular blue item is a shirt?
- Classes and Their Members
  - Is "All A are B" the same as "All B are A"?
    - If all people are mammals, must all mammals be people?



## Input – Source Code and Logical Fallacies

- Fallacies
  - Errors in Reasoning.
  - Often Occur Persistent Patterns.
  - Recognized as an Important, Practical Study
- Bugs
  - Errors in Source Code
  - Often Occur in Persistent Patterns.



#### IF Authoring Systems and the Traditional Modes of Discourse

- Output A Story
  - Narrative
  - Descriptive
- Input Source Code
  - Expository, Especially Process Analysis
  - In Inform, a Process Analysis in (More or Less) Natural Language



#### Output – A Story

- Elements of Narrative Writing
  - Plot
  - Setting
  - Characters
  - Tone
  - Theme
- Useful in Some Methods of Exposition
  - Illustrations
  - Examples



### Inform Input -- New Twists on Familiar Tools

- Inform offers writers a variety of tools for all the stages of the writing process.
  - Prewriting
    - Outlines
    - Idea Maps
  - Drafting
    - A Word Processor (Text Editor) with Features for IF Writing
  - Revising
    - A Storyboard for Checking Scenes
    - A Listing of Connecting Devices (Variables) for Easy Review

### More New Twists on Familiar Tools

- Editing
  - A Spelling Checker
  - A Specialized Usage Checker
- Publishing
  - Easy Publishing on the Web
  - A Variety of Competitions



## Ideas About Introducing Inform

- 1. Offer students some experiments with interactive fiction, using brief stories like "Snack Time" or "Lost Pig" or "The Magpie Takes the Train."
- 2. Develop a rationale for learning to write IF with Inform 7.
- 3. Present a super-simple story, with its source code, as an example.
- 4. Offer an assignment on creating a first bit of Inform code. Here's IF master Aaron Reed's suggestion on how to start. <a href="https://vimeo.com/4221277">https://vimeo.com/4221277</a>



### A Super Simple IF Story A Transcript

You've made it to your home, as usual, but it seems that you've forgotten your key.

#### **Lost Chicken**

#### **Outside Front Door**

You're outside your front door. The door is to the west, and your front yard is to the south.

>S

#### South Yard

This is the lovely south yard of your home. You can see a plaster chicken (closed) here. open chicken

You open the plaster chicken, revealing a key.



take key Taken.

#### More "Lost Chicken"

n

#### **Outside Front Door**

>W

You unlock the door and enter your house.

#### **Front Hall**

You have made it inside! Congratulations!

\*\*\* The End \*\*\*



## Inform Code for "Lost Chicken"

Outside Font Door is a room. "You're outside your front door. The door is to the west and the front yard is to the south."

The Front yard is south of Outside Front Door. "This is the lovely front yard of your house."

A plaster chicken is a closed openable container in the Front Yard. The key is in the plaster chicken.

When play begins, say "You've made it to your home as usual, but it seems that you've forgotten your key."

Instead of going west in Outside Front Door when the player carries the key: say "You unlock the door and enter your house. You've made it inside! Congratulations!"; end the story.

## Aaron Reed on Getting Started

Aaron Reed's suggestion on how to start learning Inform.

https://vimeo.com/422127 7

#### Workshopping a Lesson

- Over the next half-hour or so, you may, if you like, work in the randomly assigned groups of three to which you'll soon be assigned. If you'd prefer to work on your own, just leave your group or turn down the sound on your monitor.
- Please take about fifteen minutes to develop a tentative goal or two for a lesson or unit involving Inform.
  - If you'd care to do so, please pass your goal(s) along to others, using Zoom's chat function.
  - Some Sample Goals
    - To expose students to transdisciplinary learning through
      - A writing assignment that combines a traditional process-analysis essay with a computer-programming project, or
      - A writing assignment that combines a traditional process-analysis essay with a lab report on a computer-programming project.
    - To enable students to write a "quick and dirty" game, using Inform 7
- Then, please take another ten or fifteen minutes to work out a way to begin teaching students how to program with Information

#### So Far...

- Programming in General
  - Powerful Ideas
  - Clarity
  - Logic for Critical Thinking
- Authoring Systems
  - Modes of Discourse
    - Output
      - Narration
      - Description
    - Input
      - Exposition Process Analysis
  - Inform 7
    - Natural Language
    - New Twists on Familiar Tools

### Input for Sample Inform Code from Chat CPT3

 Using Inform 7, create code for a "find the key" story. The code should include three connected rooms, a key, two other items, and a "when play begins" rule. It should also include code that ends the story when the player finds the key.



## Sample Output from Chat GPT3

[The story begins in the hallway. There are two rooms to explore, the living room and the bedroom. You are on a mission to find the key to the locked door at the end of the hallway.]

The hallway is a room. "You are standing in the hallway, facing the locked door. To your left is the living room, and to your right is the bedroom."

The living room is west of the hallway. "The living room is a cozy space with a large couch, a fireplace, and a coffee table." [On the coffee table, there is a magazine.]

The bedroom is east of the hallway. "The bedroom is a peaceful space with a comfortable bed and a dresser." [On the dresser, there is a jewelry box.]



### More Sample Output

The magazine is [an object] in the living room. "The magazine is full of interesting articles, but none of them seem to be about keys."

The jewelry box is [an object] in the bedroom. "The jewelry box is small and ornate, with a lock on the front."

When play begins: say "You begin your search for the key. You must explore both the living room and the bedroom to find it.";

[End the story when the player carries the key:

if the player carries the key:

say "Congratulations, you have found the key and unlocked the door! You are free to continue your adventure."

end the story;]



## Sample Output from Bing Creative (GPT4)

"Find the Key" by Bing

The Living Room is a room. "You are in a cozy living room with a fireplace and a sofa. There is a door to the north and a door to the east."

The Kitchen is north of the Living Room. "You are in a small kitchen with a fridge and a stove. There is a door to the south and a door to the west."

The Bedroom is east of the Living Room. "You are in a messy bedroom with a bed and a closet. There is a door to the west and a window to the east." A chest is a container in the Bedroom. "There is a wooden chest in the corner of the room." The chest is closed and locked. A key is in the Kitchen. "There is a shiny key on the kitchen counter." The key unlocks the chest.

### More from Bing Creative

 When play begins: say "You wake up in your living room with no memory of who you are or how you got here. You have a feeling that something important is hidden in your bedroom, but you need to find the key to open it."

Instead of going east in the Bedroom when the chest is closed: say "You try to open the window, but it is locked. Maybe you should look for the key first."

Instead of opening the chest when the chest is locked: say "The chest is locked. You need to find the key to open it."

After opening the chest: say "You open the chest and find a letter addressed to you. It says: 'Dear friend, I am sorry to leave you like this, but I had no choice. They are after me and they will soon find you too. You must escape from this place as soon as possible. Take this map and follow the instructions. It will lead you to a safe where I will meet you. Trust no one and hurry up. Your life depends on it.'"; end the story saying "You have found the letter."

## Al-Detection for Bing Creative

- GPT Classifier: possibly ai-generated
- Chat GPT 2.0 Checker: 99.97% probably fake
- Turnitin: 100% ai-generated



### Using Inform's Tools to Teach Essay Writing

- Use Inform's Tools to Reinforce a Definition.
  - In defining the nature of revision, offer dynamic examples with the "Testing" tab.
- Offer an Inform 7 Exercise to Practice a Skill.
  - In helping students to revise for coherence, create a source-code error in the use of a transitional variable.
  - Ask students to find and correct the error.
- Show Students How to Use Inform in Their Own Projects.
  - Motivated students often seek such help.

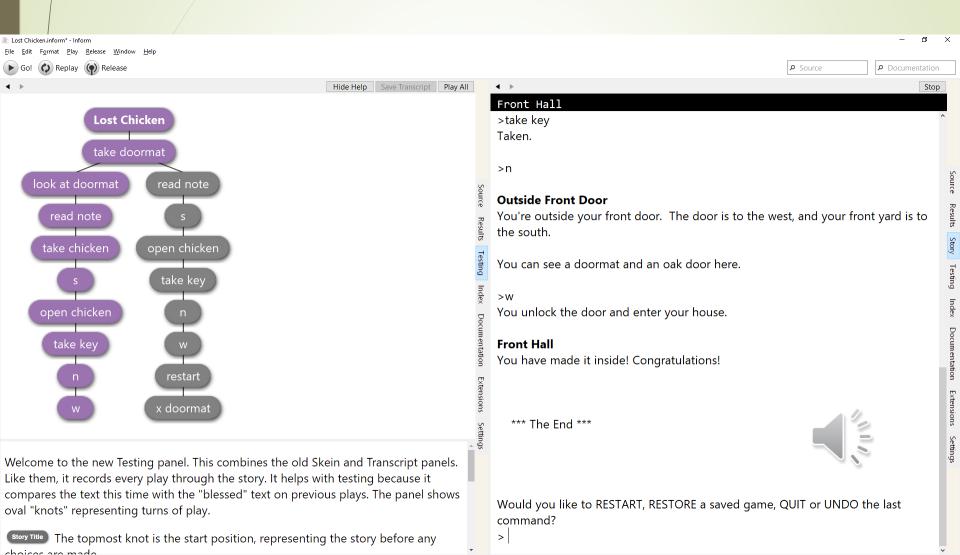


## Aaron Reed on Using the Skein and Transcript

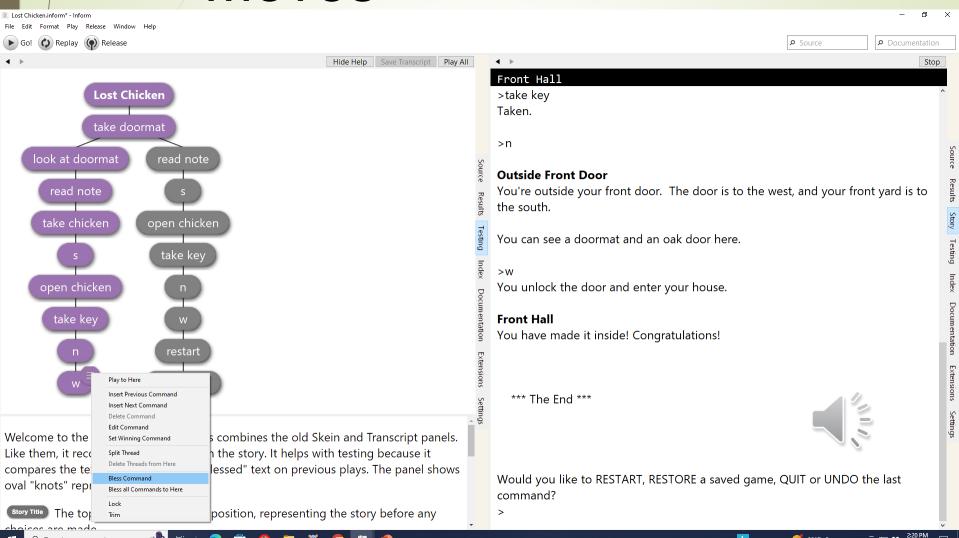
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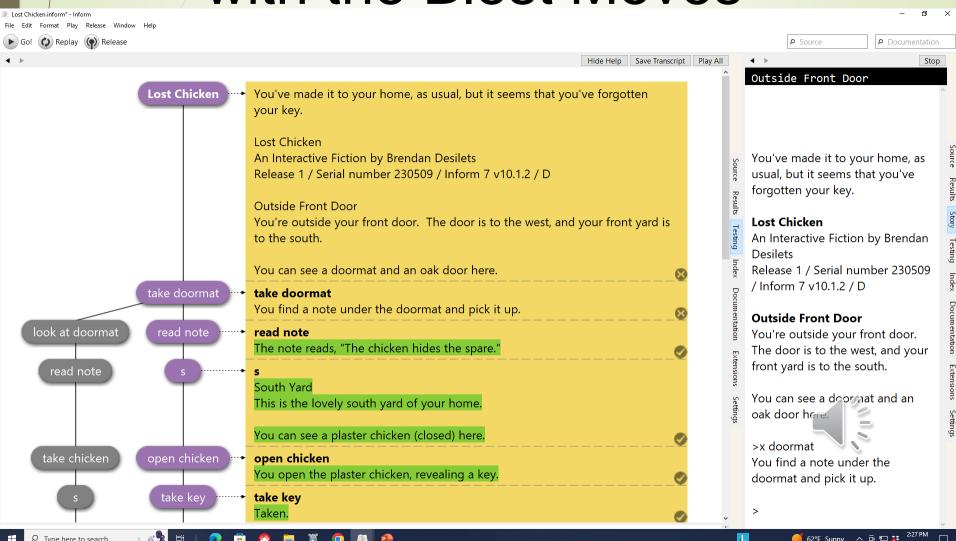
### The New-ish Testing Tab



## Blessing a Sequence of Moves

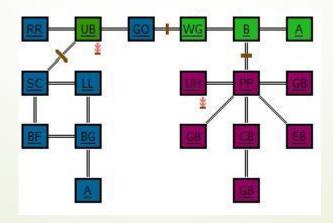


## Comparing a Sequence with the Blest Moves



### Prewriting -- Mapping

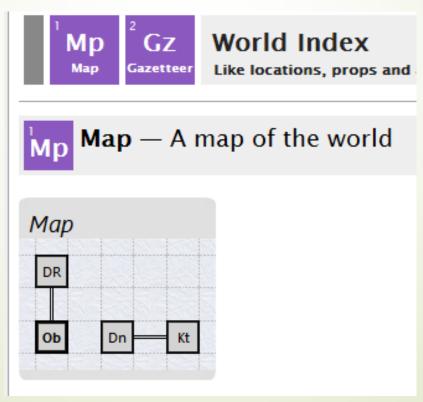
- Locations Map
  - For stories with several (or more) locations, a useful starting point.
  - Later, a useful tool for debugging movement among locations.





### Revising – Mapping – How Many Rooms?

- The Observatory is south of the Dining Room.
- The Diningroom is west of the Kitchen.





### Prewriting -- Outlining

- Built-in hierarchy for dividing up a source text.
- Volume

Book

Part

Chapter

Section

- "Contents" View
- To facilitate revising and editing, Inform automatically keys error messages to these divisions.



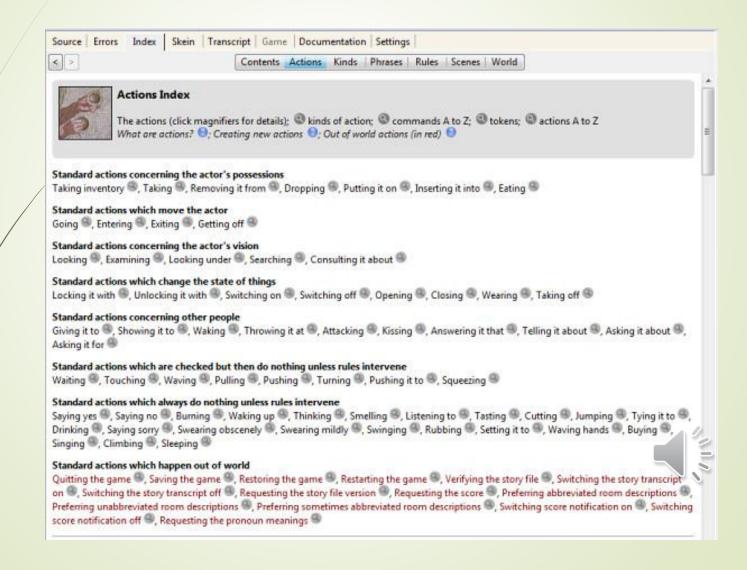
### Drafting – Specialized Vocabulary -- Actions

- Actions
  - Eighty Built-In Actions, such as
    - Taking something,
    - Examining something,
    - Asking someone about something, and
    - Inserting something into something.
  - Listed and Described in the Index → Actions Tab





#### Drafting – Actions Tab

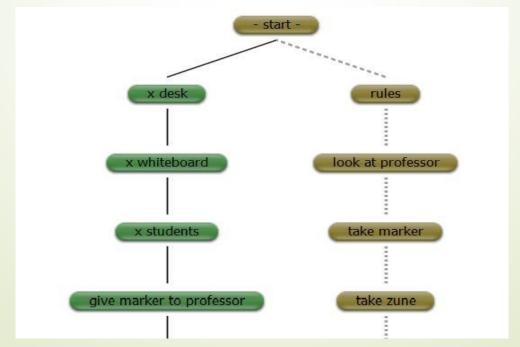


### Drafting – Specialized Vocabulary -- Phrases

- About 350 Phrases That Inform Uses
- These uses include
  - Saying (printing to the screen),
  - Creating values and variables,
  - Controlling phrases (if..then, while, repeat),
  - Making rules,
  - Aspects of the model world (ending a story, passage of time), and
  - Understanding (Using Synonyms).
- Listed and Described in the Index → Phrasebook Tab

#### Revising

- Skein Now Part of the Testing Panel
  - Lists all the paths through the story that the author has tried.
  - Allows quick replaying of any path.





#### Editing – Text Editor

Inform's color-coded text editor helps with paired punctuation marks, such as brackets.

[This is an example of a comment in Inform source text.]



#### Editing – the Compiler

- The Inform compiler flags a variety of issues that call for editing, such as
  - spelling errors, and
  - problems with various punctuation marks, including quotation marks, commas, and end marks.

#### Report on Translation: Failed

Produced by Inform 7 (build 6L38)



(Each time Go or Replay is clicked, Inform tries to translate the source text into a working story, and updates this report.)

Problem. You wrote 'Use American dialect, brief room descriptions, and the serial coma': but that isn't a 'Use' option known to me, and needs to be one of the ones listed in the documentation.

See the manual: 2.12 > 2.12. Use options

Because of this problem, the source could not be translated into a working game. (Correct the source text to remove the difficulty and click on Go once again.)



#### Publishing

- Inform source code may include various instructions for "releasing" a story. These instructions include
  - Release along with cover art, and
  - Release along with a web page.
- The interactive fiction community includes important options for publication, including the IF Forum, the IF Database, the IF Archive, and a number of friendly, annual competitions.



## Workshopping -- Materials

- Please list some materials you think you're likely to use in your lesson or unit.
  - Examples
    - A writing assignment handout (See <a href="http://bdesilets.com/if">http://bdesilets.com/if</a> for examples.)
    - A super-simple Inform game, with a transcript, for students to use as a model program
    - Aaron Reed's Inform Video
- If you'd like to pass these along to others, you might want to use Zoom's chat function.



# Some Qualities of Good Writing

- Unity Sticking to the Thesis
- Coherence Making the Connections Tight
- Clarity Understandability

#### Unity

- Sections of Source Code (Volumes, Books...)
- Index → World shows how all rooms, objects, and people "contain" one another, causing violations of unity to stand out. Here's a simple example, with two rooms and a smattering of objects. Note the object that may violate the unity of the story.
- Play Room
  - Toybox (container)
    - Toy well
- Office
  - Desk (supporter)
- Nowhere (that is, initially not in any room)
  - Brass key



#### Coherence - Values

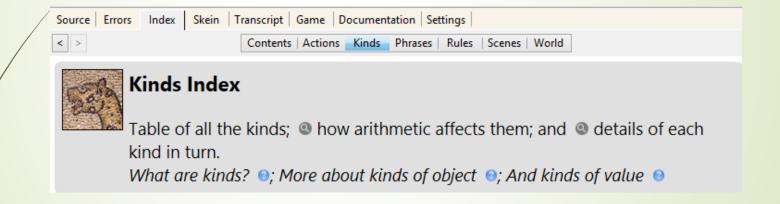
- In interactive fiction programming, values provide great transitional power.
- In fact, writers sometimes think of Inform's values as ways for one part of an Inform story's code to send "messages" to another part.
  - Suppose, for example, that, in one part of an interactive story, the main character may or may not drink a triple shot of whiskey.
  - Suppose, further, that, an hour later in game time, the character may or may not decide to drive a car.
  - The Inform author will likely use a value to send, to the later part of the story, a message about whether the character imbibed heavily earlier in the game.

## Coherence – Some Inform Code Using a Value

- The following code creates "sobriety" as a variable. The default value of sobriety is set at "sober."
  - Sobriety is a kind of value. People have sobriety. The sobrieties are drunk and sober. A person is usually sober.
- Here's some code that allows the variable to vary.
  - The player carries some whiskey.
  - Instead of drinking the whiskey: say "You drink the whiskey"; now the player is drunk.
- Our code is now passing the value of sobriety from its default to its correct value later in the story.
- This sort of transition is very powerful, but it can become complex in many stories.

#### Coherence – Managing Values in Inform – Kinds Index

- Index -> Kinds
  - Lists all values that are defined as "kinds"





Value sobriety [2]

Default sober

# Coherence – Managing Values in Inform – Showme Debuging Command

- The Showme command lists several important qualities of a person or thing, as the author plays through the story. These qualities include all relevant values.
- >SHOWME ME
- yourself person
  - whiskey
- location: Kitchen
- singular-named, proper-named; unlit, inedible, portable; male
- printed name: "yourself"
- printed plural name: "people"
- indefinite article: none
- description: "As good-looking as ever."
- initial appearance: none
- carrying capacity: 100
- sobriety: sober



## Clarity – Did I say what I meant?

- Clarity is notoriously hard to achieve.
  - It's even hard to spot errors in clarity, if a writer doesn't have a "second set of eyes" available.
- In programming, the output that results writer's source code often offers dramatic evidence that the writer did not really "say what they meant."
- In Inform programming, in order to identify a problem in clarity, it's useful to compare the output of two versions of the author's source code, side by side.
- As we've seen, Inform's "Testing" function makes such a comparison possible.

# Promoting Clarity in Inform – or Anywhere Else

The most effective way of improving the clarity of an Inform story (or any other kind of writing) it to get someone to try out your story and report back to you.

You can find playtesters almost anywhere – among your family members, your friends, or anywhere else where there are people who have experience with interactive fiction.

An especially effective way to find playtesters (also known as beta testers) is to use the Interactive Fiction Forum (<a href="https://intfiction.org/c/playing/beta-testing/24">https://intfiction.org/c/playing/beta-testing/24</a>)
Be sure to let your testers know what kinds of information you're seeking.

And be sure to THANK THEM! Thorough testing is painstaking work, but its results are uniquely valuable.

### Workshopping a Lesson

- Please take a few minutes to develop some procedures for your lesson, and/or a way to evaluate it.
- Share what you have via Zoom Chat, if you like.

#### References

- DeLaplante, Kevin. "Logic for Critical Thinkers, Parts 1 and 2." Web. 22 May 2020. <a href="https://www.youtube.com/watch?v=70Diimu6ARU&t=184s">https://www.youtube.com/watch?v=70Diimu6ARU</a>.
- Desilets, Brendan. "Logo and Extended Definition." Journal of Teaching Writing 5.1 (1986): 43-50. Print.
- Montfort, Nick, Exploratory Programming for the Arts and Humanities. Cambridge Massachusetts: MIT Press, 2016. Print.
- Montfort, Nick. Twisty Little Passages: An Approach to Interactive Fiction. Cambridge, Massachusetts: MIT Press, 2003. Print.
- Nelson, Graham. "Inform 7: Interactive Fiction from Natural Language." 2006. rec.arts.int-fiction. Web. November 22, 2010.
- Papert, Seymour. Mindstorms: Children, Computers, and Powerful Ideas. New York, New York: Basic Books, 1980. Print.
- Reed, Aaron A. Creating Interactive Fiction with Inform 7. Boston: Cengage Learning, 2011. Print.
- Rees, Gareth. "Game Design and Game Analysis." Inform Programming. October1995.Web. November 22, 2010 <a href="http://www.doggysoft.co.uk/inform/write/desgn.html">http://www.doggysoft.co.uk/inform/write/desgn.html</a>.
- Sandvik, Linda, perf. "Interview With Linda Sandvik of Code Club." Ubuntu UK Podcast. Ubuntu UK Local Community Team, 27 Jun 2013. Web. 19 Jul 2013. <a href="http://podcast.ubuntu-uk.org/2013/06/27/s06e18-a-midsummer-nights-ubuntu/">http://podcast.ubuntu-uk.org/2013/06/27/s06e18-a-midsummer-nights-ubuntu/</a>>.
- Get Lamp. Dir. Scott, Jason. Prod. Jason Scott. Bovine Ignition Systems, 2010. DVD.