

Discoverer's Digest

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Lifetime of
Learning

Bridging
The Gap

Sketching
YOUR
Reality

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I

Interactive Fiction

A Lifetime Of Learning



PERHAPS NOT SINCE written language itself have we had a method of challenging our critical thinking skills so impactful for the mind as Interactive Fiction

"In the beginning the Universe was created. This has made a lot of people very angry and been widely regarded as a bad move."

-Douglass Adams

I stare intently at a small glass computer screen perching over a flat, rectangular Apple II/c. The small cathode-ray screen emanates a green glow from which I read prose presented in all-caps text. From the outside looking in, an 11 year-old boy stares intently at the screen as he sits in his modern kneeling chair. His attentive posture and the fingers of both hands rest lightly on the keyboard indicating total concentration.

From the inside looking out, I see my breath cloud across the face of my brass compass. I take my bearings by the flickering amber light of the carbide lantern in an otherwise pitch-black cave. The lantern's glow encroaches, then recedes, up the cave's walls and over my shoulder from it's resting place on a cold, wet slab of stone. I clasp shut my compass and grasp my lantern for a better look around. I hold it higher to search my surroundings with readied senses. Any detail I can discern from my surroundings are a welcome receipt that it may further my journey to the crest of my next discovery. Are there any inscriptions on the cave walls? Do I see signs of an adjoining passage evidenced by the flow of water? How does this area fit in with my extended surroundings?

I would be hard-pressed to articulate the concept of logic at this age; I can only feel it. The game present requires me to think carefully knowing that only clues from my surroundings and reasoning will advance my endeavor. I want badly to know what's around the next corner—a passion that drives me to align my thinking to achieve.

THE PASSION NEVER DIES

Today I write before a high-resolution screen having a dark grey background beneath multi-colored syntaxed lettering. While the technology advances greatly from the glowing green CRT screens of the past, the foundation of deduction, logic, and resolute determination have not. The methods the authors teach through play gifts, at least in part, the skills and optimistic outlook important for a fulfilling life. Don Woods said IN AN INTERVIEW that were he to think about IF he would probably not have recognized his work as a new medium at the time. I

The technology changes but the human drive for knowledge never does



Searching every feature for a step to the next challenge. (Photo: TOBIAS HELFRICH)



The venerable Apple II/c becomes an Oracle of logic. (Photo: BLAKE PETERSON)

humbly submit that he may not also have realized that he and Crowther sparked the spirit of sharing and achievement in a new generation by incentivising discovery.

My story is not unique. Hundreds-of-thousands share this experience with some variation, either by age, place, or both. Legend has it that the venerable text adventure, *Colossal Caves*, shut down all productivity at MIT's computer science department for a week. Presuming those pioneering souls experienced what I had playing the game it is not hard to see why: the common thread running through IF's history are the ways it captures the reader's imagination.

ACTIVE PARTICIPATION

A high percentage of interactive fiction readers are also interactive fiction writers. I like to think that those who read interactive fiction are 'doers' by virtue of their preference for taking an active role in their reading. You authors are kindred souls, like the *Indiana Jones*' of the literary world. For this reason, *Discoverer's Digest* is heavy on authorship content. Topics ranging from using physical GPS coordinates in your games to creating art that rivals commercial works even if you can't draw are covered.

Technical embellishment of the technical discussions in this issue lean primarily toward TADS3 on Linux. However, the applications/methods I cite are almost always directly applicable to other, similar applications using various operating systems.

EXPERIENCE IS EVERYTHING

The heart of Interactive Fiction is the medium's hold on people...the way it washes away your surroundings and transports you to another time and place. I hope most of all to give the gift of a good story to all.

I give you in this issue a review of some "old school" IF concepts tied to modern, practical methods you can use to achieve an experience envisioned by the inspired authors in the past who found themselves limited by the technology available at the time. My hope is that by using some or all of the techniques outlined here that you truly immerse your audience in your story and that they are better for it.



Interactive Fiction readers are 'doers'
(Photo: PARAMOUNT PICTURES)



Cypher, an example work of modern interactive fiction
(Photo: GAMEENTHUSIEST.NET)

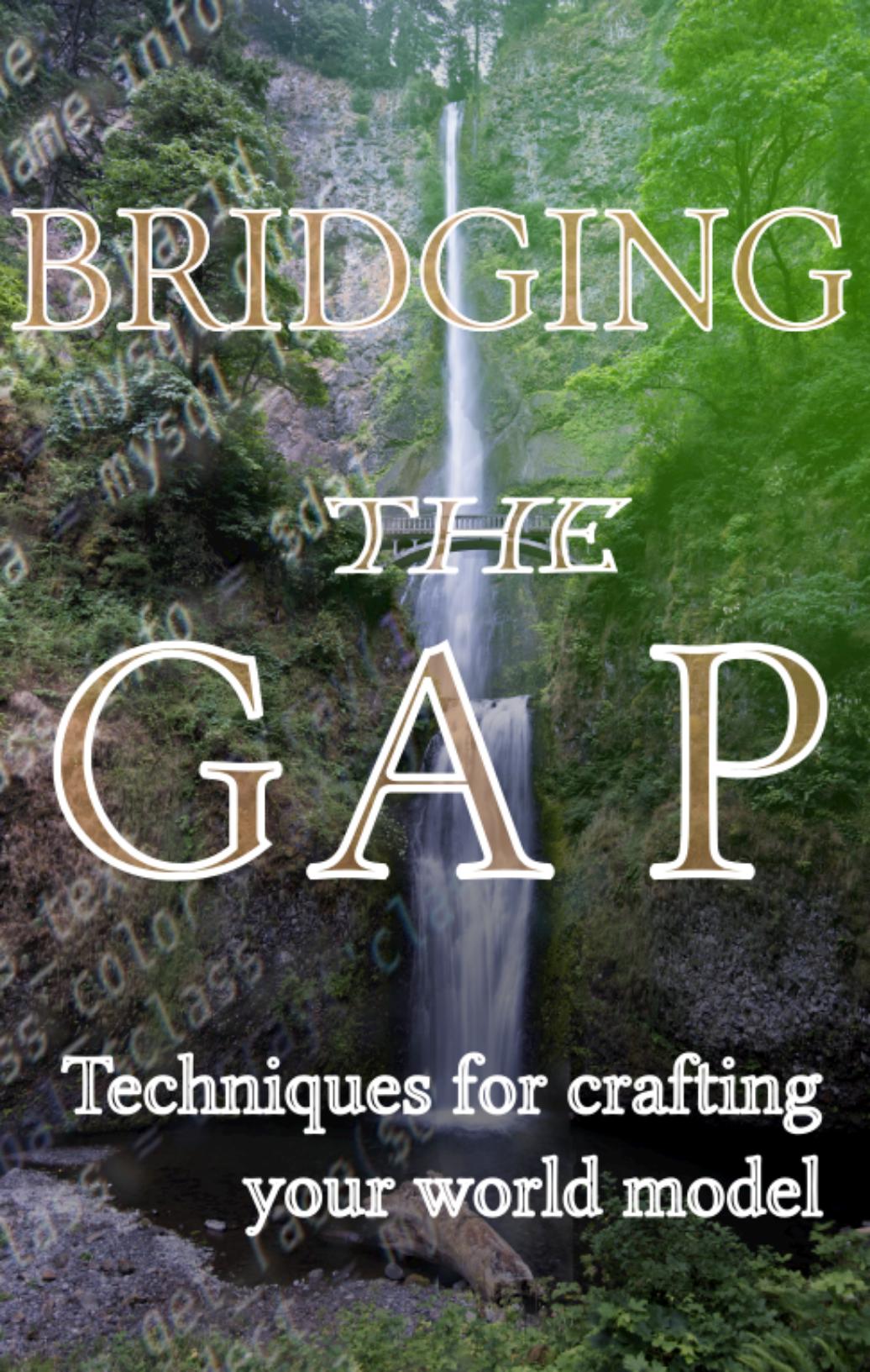
All in all, I hope you enjoy this magazine. If you like, please feel free to submit your news, story ideas, questions, and comments. *Discoverer's Digest* seeks to cover all manner of topics related to IF, ranging from parser experiences to choice—games, to experiments in the medium (including General Artificial Intelligence) that we've not yet seen. This is especially true as **IFCOMP** is coming up and I'm excited about that.

To submit you can simply send a personal email to

COOPER@COOPER.STEVENSON.NAME.

Happy Writing!

D. COOPER STEVENSON

The background image shows a waterfall flowing down a steep, rocky cliff covered in dense green vegetation. A wooden bridge spans the waterfall at its base. The water creates a misty spray at the bottom.

BRIDGING THE GAP

Techniques for crafting
your world model

II

Bridging The Gap

Techniques For Crafting Your World Model



HUMAN PERCEPTION SPANS all our senses and sensibilities. Here are a few ways to codify your readers' experience. (Photo: TOM WALKER)

"One's destination is never a place, but a new way of seeing things."

-Henry Miller

MUSEUMS FOR THE MIND

ONE of the joys of a good work of Interactive Fiction is the feeling you get when you interact with the parser on something that you know probably isn't part of the core for furthering the story but pleasantly discover that your inquiry works anyway. Even if your interlocutors don't inspect every detail of their surroundings, just knowing that he is touring a world crafted with care goes a long way toward immersion. A fleshed out world also, in a practical sense, implicitly tells the interlocutor that not every object is significant. This makes the reader have to understand the *solution* the author is trying to convey as the discovery may be had only through careful thought and not through, "Oh, here's a set of keys—these *must* be important." A key to a work focused on immersion, I believe, is a world where the author has taken the time to respond intelligently to reasonable inquiries by the player.

I garner the following factors important to give the reader a sense of immersion:

- Responses for all senses (touch, smell, etc.)
- Differing descriptions based on direction of travel
- Triggered, geography independent narrative
- Multiple responses to the same command
- Leaving area messages based on conditions
- Arriving area messages based on conditions

Fortunately, there are techniques that can help lighten the burden. Developing a systematic approach, at least during the planning phase, can help further your efforts and reduce the feeling that your remaining work is overwhelming.

Taking the extra effort and polish to detail your world

A systematic approach to further your long term story goals

TOGETHER WE STAND

The first and most powerful technique, if possible, is to get help. Make a call to the Interactive Fiction forums calling for help in

areas you may not be strong. In my case, I am both a good IF architect and writer but my writing is slow. Someone else may be a good writer but finds “slaving away” building the world model a task that is simply “beneath” their artistic talents. I, on the other hand, am a facilitator who craves giving artists the ability to provide the audience with a world model who’s prose is constantly fresh, complete with varying responses based on the direction they’re looking, varying descriptions each time, decorative scenes, and atmosphere. I find the little things not necessarily adding to the core of the work’s message but furnishing the world with just a little extra detail immensely satisfying. The writer and I are a match made in heaven. The writer is presented with a beautifully templated world model—all they need to do is fill in the blanks. I benefit because I can focus on the architecture and each components’ relationship to one another.

THREE LAYERS OF INTERACTION

If we take a work at face value to be focused on the narrative then it makes sense to find a way to weave the narrative in with the world model. This is the difference between a work that the interlocutor *reads* and a work that he *hacks through* looking for clues.

Let’s break the work down into three layers, from the lowest to the highest:

- The Reference Layer
- The World View Layer
- The Story Layer

REFERENCE LAYER

The reference layer provides the interlocutor with background information about your world model to be looked up as needed. Several reference models are possible, anything from a notebook carried by the player, a computer terminal in the work, or even spinning rings as in Orson Well’s *The Time Machine*.

Talent wins games,
but teamwork and
intelligence win
championships.

An ounce of detail is
worth a pound of im-
mersion.

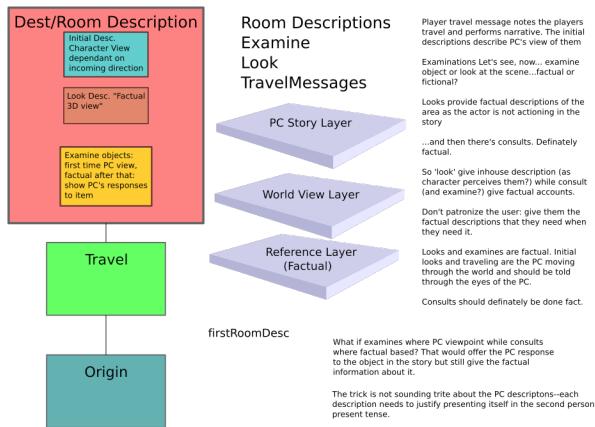
A layered approach.

THREE LAYERS OF INTERACTION

The Reference Layer may even be a physical book or PDF distributed with the work.

Whatever form the factual reference layer takes it's purpose is to enrich the world model and to provide background and orientation to help the reader's success in the work. I don't want to confuse matters, but the reference layer also includes descriptions of objects and areas after the initial examination/visit. The work is structured to first give a "flowery" description of an object, for example, but after that the factual layer takes over and provides a "clinical" view of the scene. You've already weaved the significance of the given object in story form on first review. After this the interlocutor is familiar with this objects relationship in the world space and wishes to concentrate on the practical matter of deciphering the object's meaning in relation to achieving his goals.

The reference layer provides a segue to build cognitive world knowledge.



WORLD VIEW LAYER

Moving up from the reference layer is the world view layer. This includes area/object descriptions, the interlocutor's sense (sight, smell, touch, etc.) descriptions, and atmospheric spice sprinkled throughout the work. Thousands of pages are written on this topic. The overarching theme is generally this: keep

The world view layer grounds the reader in the world model.

your descriptions sharp, brief and (by design) relevant. Recall that we've broken our work down into three distinct layers. We'll interweave literate prose in this World View Layer in the next layer up, that is, the Story Layer.

- Refined Prose for the initial view, factual view afterward
- Descriptions dependent on incoming direction
- Multiple descriptions to reduce tedium

Mechanically, pointing a text summarizer at Wikipedia to boil down complex descriptions of an area to just a few sentences goes a long way to lighten the writer's burden. Place the summarizer's descriptions in your flowchart (outlined below). From here you flesh out the descriptions in your final work. Doing this goes a long way to not feeling like finishing the work is an insurmountable task.

STORY LAYER

This literary layer weaves the narrative with the world view layer. Its purpose is to bring narrative to the work—to make your story read like prose. The story layer also can help guide the interlocutor with hints.

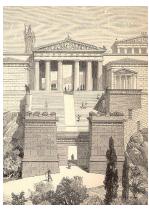
I implemented the story layer through three methods in TADS. The first is the "initial description" feature, the second by the use of travel messages, and the third a special 'narrator' character who, while not physically existing in the model, injects prose into the work. The narrator is triggered by event state changes.

The narrator fills real-time gaps in the reader's thinking, helping him to achieve the next crest of the story.

Here's an example of using refined prose for the initial view:

Propylaea Gateway

Reddish, golden light bathes the tops of the massive walls fortressed against the violet sky. The contrast of light and shadow sharply mirrors the angles of the opposing walls relative to the rising sun. Below the sun's grasp lies softer, luminous blue light making angled pockets of shadow. Dew lightly covers the ground and continues up the walls where it glistens as tiny, fractured rainbows



The reader is greeted with ancient proportions in The Acropolis
(Photo: JOSEPH KÜRSCHNER)

above the shadowed relief. The air is fresh and slightly chilly with an awakening smell of moist clay.

Beyond the wall's opening to the northeast lie a wide flight of steps rising 40 meters and stretching roughly 25 meters wide. The steps end to meet a large six-columned Doric facade at the top.

A scholarly man somewhere in his mid-sixties reads from a scroll nearby. His calm posture looks to Xantius as he's patiently waited for a thousand years. He wears a white robe with a red sash draped around his shoulders to his mid-section.

Okay, noting earth shattering here—IF writers have used this technique for years. You get to exercise your writing chops and, most importantly, the reader is greeted with engaging prose. Your descriptions speak directly to the reader. If we've "gotten out of the way" and formed a direct conduit to the reader we've done our job.

Let's move from here northeast up the Propylaea's steps through the archway of the fortressed wall. Initially, the interlocutor reads thus:

Propylaea Steps

Moving higher, Xantius's footsteps echo from the steps' sides, where he is now about halfway up. The Propylaea steps rise impressively before Xantius, stretching across his entire field of view; roughly 100 men could stand shoulder-to-shoulder spanning the steps' width. The stairs are divided into three sections by virtue of their varying grades: finer, longer front-to-back cuts in the center shouldered by shallower, steeper cuts on either side. The steps continue upwards to a landing. A narrower and steeper set of stone steps cut inset to the ridge on Xantius's right.

[The Interlocutor moves further up the steps and then back down.]

Propylaea Steps

The Propylaea steps continue their descent to the Acropolis outer walls before Xantius, stretching his entire field

of view. The steps run higher above and behind you to a landing A small flight of steps cut into the steps' border wall lead off to your left (South).

[The Interlocutor moves further down the steps and then back up again.]

Propylaea Steps

Xantius moves up the Propylaea steps, this time on the right side where the grade of the steps are steeper. "I wonder why they made the outside grade of the steps steeper than the inside? Was it so merchants could make it easier for supplies to be delivered by cart to the Acropolis?" he thinks, approaching the stone steps leading in from Xantius's right. Before him the Propylaea steps rise to the upwards to the West Porch

> look

Propylaea Steps

The Propylaea steps rise at roughly a six per cent grade from the southwest to northeast, running roughly 300 meters from the Propylaea to the stairs' top to the West Porch.

There's a lot going on here. The interlocutor first gets quality descriptive prose when first encountering an area. When he returns from the area from a different direction the description adapts itself to the reader's opposite vantage point. When combined with varying prose dependent on direction of travel and the environmental messages I mentioned above you breath life into your story. Also, we've varied the description outlining the reader's travel with, "...moves up the Propylaea steps, this time on the right side where the grade of the steps are steeper." These small details go a long way toward immersion and reduces tedium.

Notice the last passage, when the reader enters **look**. We know that he's looking for factual information about his surroundings. A "just the facts" description, indeed, is exactly what we give him (The Propylaea steps rise at roughly six percent grade...). The **look** command is an indicative command as it indicates what type of response he's looking for.

Varying responses
keeps the world model
interesting.

ALL WORK AND NO PLAY

We can leverage the concept of indicative commands by recognizing when the interlocutor tries things that are just plain silly.

For example, when the reader is standing in the Propylaea Gateway from the example above all his senses are available to him. He can smell the air, smell the wall, etc. None of these commands are silly, *per se*, except when he tries to ***lick the wall***:

Never taking yourself too seriously.

Propylaea Gateway

> lick wall

Xantius extends his tongue and leans close to the wall. "This is crazy," Xantius thought, pausing for a moment to consider how he might appear to perplexed on-lookers. "C'mon," he goads himself, "go ahead, go ahead and lick it, I 'double-dog' dare you!" Moving again closer, Xantius's outstretched tongue contacts the rough wall, making tacid contact pressing to "full-on" docking. He imagines himself viewed from the side, his tongue and the wall's permutations now inversely mirroring each other in perfect relief.

Xantius's laranyx lets out a half cough as the rest of his pie hole is engaged with this ridiculous show of machis-mic servitude. Xantius textures the invading, finely-particled nip of marble and limestone on his tongue and, in a twist he hadn't considered, the outer perimeter of his mouth. His moist breath sucks some of the wall's material back into the openings surrounding the axis of his acrid folly.

"Congratulations, Xantius," he thought, "you're a hero."

A little eternity passes before Xantius pulls his geology-coated tongue away from the wall. He presently gets right to making several paulyr facial expressions as he tries to dislodge the grit from his mouth—to end the grinding sound of sand emanating from inside his skull, broadcasting his displeasure in the process.

Here we “break the fourth wall” giving the reader the idea that we’ve been thoughtful designing our world and a break from the challenge intrinsic in the experience.

NARRATION, MORGAN FREEMAN STYLE

Here is an example of enhancing the story through a narrator as mentioned on page 12. If the protagonist doesn’t bother to say hello to the scholarly man wearing the sash this will happen (please excuse the terrible writing):

Propylaea Gateway

> ne

Each of Xantius’s senses vie for his attention as he pieces together meaning of the scene before him. He moves slowly, noticing the ”crunch, crunch” of the paultered ground under his feet turning to a paddled beat on the marble steps. With his footing tentatively stepping upward on the Propylaea steps, he raises his gaze upward, naturally straining his neck higher as he sizes up the ascent’s rising to the six- columned Doric facad marking the entrance of the Acropolis proper.

”What kind of civilization builds a place like this?” Xantius asks himself, ”If such a place on earth hadn’t existed prior to time of the Acropolis’s conception, who envisioned the city...what genius created it?”

Pausing, Xantius breathes in the the dense, moist air breezing in from the nearby Medditerranian Sea.

Xantius suddenly realizes, ”I hadn’t gotten that man’s name! I have many questions, to not seize the opportunity to speak with him again is to betray it.”

When Xantius travels after having met the man, Xantius is created with the varied travel/description prose as described above plus this bit (again, please excuse the corny dialog):

Propylaea Gateway

> ne

[Story travel/description dialog]

”I just met Socrates. The. Socrates. Xantius bolted at the idea. I have so many questions to ask him!”

...

TYING LOOSE ENDS

In the next issue of *Discover's Digest* I'll include more specific examples and code snippets for applying the layering techniques we discussed above.

Sketching Your Reality

APPROACH

- Establish project structure
- Establish estimates
- Estimate product and task attributes
- Define project scope
- Estimate effort and cost

METHOD

- Develop a project plan
- Establish the budget and schedule

LIFE CYCLE PHASE

- Identify project risks

INITIATE

- Plan for data management

DETERMINE

- Plan for project resources

IMPLEMENT

- Plan for required knowledge and skills

MONITOR

- Plan stakeholder involvement

RECORD

- Establish project plan

RE-PLAN

- Obtain commitment
- Review plans that affect the project

THE PROJECT

REVISION

DO

RENEGOTIATE

THE BUDGET

HOLDER AGREEMENT

MENTED REQUEST FOR COMMITMENT

MENTED COMMITMENT

COMMITMENT DATA

- Obtain plan commitment

- Institutionalize a managed process

- Institutionalize a defined process

PROJECT SCHED

major milestones
assumptions
constraints
dependencies

PROJECT BUDG

IDENTIFIED RIS

risk impact
probability of occurrence
risk priority

DATA MANAGEMENT

MANAGED DA

data content description
format description

INITIAL PROJ

DEFINITION CO

DISTRIBUTIO

SIMULATION CO

PROJECTIONS

SECURITY

PRIVACY

REQUIREME

STAFFING

ADMIN

DIAGRAM

E

PROCESS/WORKFLO

SKILL NEED

STAFFING AND NEW

SKILL AND TRAINING

STAKEHOLDER INVOLV

PROJECT PLAN

Planning And Authoring

Your Adventure

Obtain commitment

Institutionalize a managed process

Institutionalize a defined process

III

Sketching Your Reality

Tips For Authoring



PLANNING YOUR ADVENTURE doesn't have to be a slog—here are some tools to help (Photo: BAYERISCHE STAATSBIBLIOTHEK, MUNCHEN).

"Reality is merely an illusion, albeit a very persistent one.."

—Albert Einstein

So you have an idea for your work of Interactive Fiction. You've mulled the idea around for some time—now it's time to start putting your thoughts on paper (or screen, as it were) but where to start?

Ready, set, go!

Planning is the key but it's better feeling unconstrained about the order of execution

There is no One Way to build a work of IF. Like authorship itself, some writers like to plan their work ahead of time. Others like to simply spring their writing spontaneously. Still other authors like to work between a combination of the two. Where IF differs from traditional authorship is the necessity for at least some degree of planning. There are many methods for sketching out your work and I make no constraints for the order by which you choose to build your world model. You will likely find yourself iterating between the various layers of your work. There is no need (and I would argue not as effective) to complete one layer before beginning the next.

Simply by necessity of categorizing the craft of IF I offer the following broad layers for producing quality work.

PHYSICAL WORLD LAYER



There exists virtually no end of maps you can use to inspire your work, including star maps (Photo: CELESTIA SCREEN CAPTURE).

Your overall plot in mind probably lends itself to a setting. In the case of *The Acropolis* the setting is obvious—oddly enough, the Acropolis itself. If you're new to writing IF you will give yourself a leg up on finishing your product by taking inspiration from a physical location. You also serve yourself as your work will "feel" real, similar to the way the venerable *Colossal Caves Adventure* is revered in no small part because it is based on a real cave. The reader finds himself immersed in his environment because the work is crafted from a real location, free from contrivances.

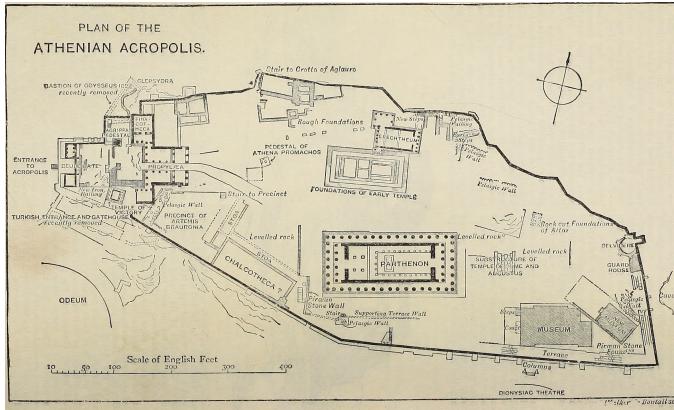
A helpful method is to download a map and overlay your IF's map concept over that by

drawing boxes over each location with connectors in-between. *Inkscape*'s connector tool is effective for this as it gives you freedom to place your locations wherever you like while taking care of the connector details.

If you prefer a templated approach—one that will build a world model for you after you've finished your map—**IF MAPPER** and **TRIZBORT** are two utilities to do this. If you prefer a

Drawing inspiration and templating from real-world source material.

PHYSICAL WORLD LAYER



REAL MAPS OFTEN provide an effective source of inspiration (Photo: A CLASSICAL DICTIONARY OF GREEK AND ROMAN BIOGRAPHY)

programmatic approach, IFM lets you create a map from a text file. **T3SKETCH** offers a complete templating system for TADS3 (including build tools) to lay down your world model (Hint: use the included xml file in the repository `t3sketch/example/living_quarters.xml` to get started).

COMPOSING THE SCENE

Visiting a location and writing everything about it inspires

You may find yourself in a place where you've mapped your story (at least partially) and find yourself with a myriad of empty location boxes needing a description. One method I 'stole' from the excellent travel writing: see the world. sell the story book is to physically visit a location with your notebook and simply, "write like hell." Capture everything you're experiencing in this location as scribbles—just get it all down. Record the sights, both local and distant, the smells, the sounds, etc. Your location needn't necessarily be one similar to the locations in your work of IF as you're almost certain to draw inspiration from your "fast and furious" writing on location. Another good way to fill in the boxes is to summarize works of text found on the Internet that resemble your location with a natural language summarizing tool like [SUMY](#). Simply point to your location description's URL and let it generate a few sen-

*Text summarizers are
helpful for quickly
drafting locations*

Celestia's "free range" space exploration system means you can accurately plot a universe for your works of Science Fiction (Photo: Vivek Gite, nixCraft)

tences about your location. Here's an example of the summarizer pointed to a description of the Parthenon:

```
$ sumy lex-rank -length=10 -url https://www.ancient.eu/parthenon/
```

The magnificent temple on the Acropolis of Athens, known as the Parthenon, was built between 447 and 432 BCE in the Age of Pericles, and it was dedicated to the city's patron deity Athena.

From the 4th century BCE the whole building acquired the name Parthenon. The Parthenon would become the largest Doric Greek temple, although it was innovative in that it mixed the two architectural styles of Doric and the newer Ionic.

It was entered through large wooden doors embellished with decorations in bronze, ivory, and gold. The temple was unprecedented in both the quantity and quality of architectural sculpture used to decorate it.

The pediments of the temple measured 28.55 m in length with a maximum height of 3.45 m at their centre.

Many of the metopes on the other sides of the building were deliberately damaged and figures in the central part of the east pediment were removed.

Not bad. You've now a foothold by which to base your descriptions; "slice and dice" your summary to suit.

A PICTURE WORTH A THOUSAND WORDS

Now we've mapped a framework for our world using a map tool, and used a summarizer for each locations' description let's suppose we'd like to add images for some or all of our locations.

Obviously, pointing a search engine looking for appropriately licensed images will do some of the job, and there are plenty of free resources for you to include in your work. PIXABAY, WIKIMEDIA, and PIKIWIZARD are all available to name a few. Eric Matyas, by the way, offers a wide range of IMAGES AND SOUND EFFECTS available for IF authors; you need only provide the appropriate attribution for his work.



AN ARTISTIC MEANS
of capturing your
readers' attention
by the tasteful
use of color on
black-and-white
(Photo: PIXABAY:
"STEPPINSTARS").



IMAGINE YOUR INTERLOCUTOR AS the first to discover organic molecules with the help of freely available NASA images (Photo: NASA/JPL-CALTECH)

BLENDER



A 3D MODEL of the Acropolis is free for download and use
(Photo: Sebastian Kiersz)

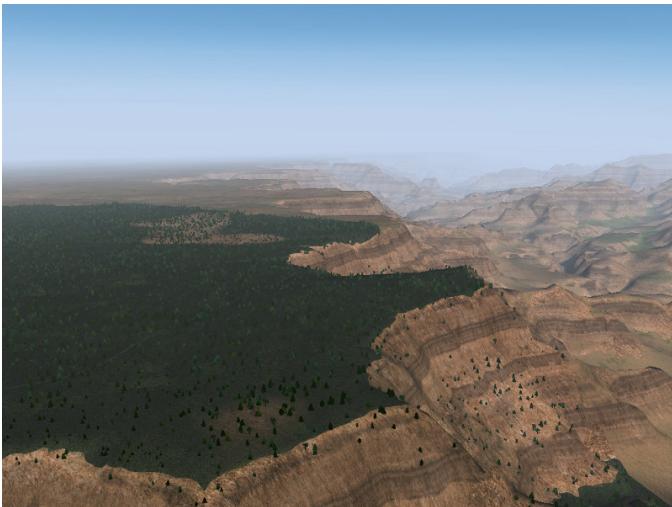
Having a free, full-fledged 3D modeler is tough to beat for giving your readers a graphical way to orient themselves in your world model. Complete agency extends as far as your imagination. It's not hard to imagine a super-imposed compass rose on the floor of each location to further ease the interlocutor's navigation through your world. In the case of Acropolis a READY-MADE MODEL EXISTS.

FLIGHT SIMULATOR



FlightGear's map modelling software makes making good-looking maps easy
(Photo: GEOFF MCCLANE)

You can map out entire outdoor spaces using FLIGHTGEAR's mapping and view options. Flightgear is quality open source flight simulator that is available for free download. You can use Flightgear to map out accurate GIS experiences or as an inspiration to an environment of your creation. First, use the A MAP TOOL SUPPORTING LATITUDE/LONGITUDE COORDINATES to plot the points you want to describe. Then use FlightGear's "UFO mode" to place your location precisely where you want it. You can use



FLIGHTGEAR OFFERS DETAILED & stunning views of natural terrain
(Photo: FLIGHTGEAR PROJECT).

either a screenshot tool or FlightGear's built-in tool to capture the scene. If you're really ambitious you can capture a scene for each compass direction should the interlocutor type a look directive with a specific direction like > look east.

A mapping tool based on FlightGear's data may be had with ATLAS. You define the area and features that you want to map and Atlas provides a nice shaded relief map.

Other sources for map inspiration include QGIS geographical information system software and FLIGHTGEAR'S MAP SERVER. Both these applications offer stunningly sharp detail.



FlightGear's map server is fast and provides detail down to the individual tree level (Photo: flightgear map server)

SPACE SIMULATORS

Space simulators like STELLARIUM and CELESTIA come as ready-made sources for star maps and scenery. Both offer the ability to locate yourself in any number of reference points from which to base your story. Imagine a Science Fiction story who's view out the ship's portal is an accurate depiction of the location's celestial bodies!



STELLARIUM'S VIEWS offer "world-class" experiences (Photo: Karol Novotny, star-watcher)

PLOTTING THE STORY LAYERS

Works of Interactive Fiction that do not (or at least minimally) commit CRIMES AGAINST MIMESIS require careful planning. When the reader is rewarded having achieved the next phase of the story to a beautiful scene including, “golden, sun-drenched waves splashing against the towering rock formations,” the last thing we want our locutor to experience is this:

Gold Beach

...golden, sun-drenched waves splash against the towering rock formations in relief?

> **look at rocks**

You see no rocks here.

Plotting isn’t limited to your physical world layer; you can use it to map your plot and narrative layers too.

For example, in [ON THE FOLLOWING PAGE](#) I lay out the conversation in Plato’s [THE REPUBLIC](#). Each character is listed horizontally across the top of the plot. Each topic they discuss, in order, is listed vertically along the left-side. From here we can create `ask/tell` directives for the compiler.

In the next edition of *Discoverer’s Digest* I will include the code snippets for producing the examples of world/plot/narrative plotting I cited above.

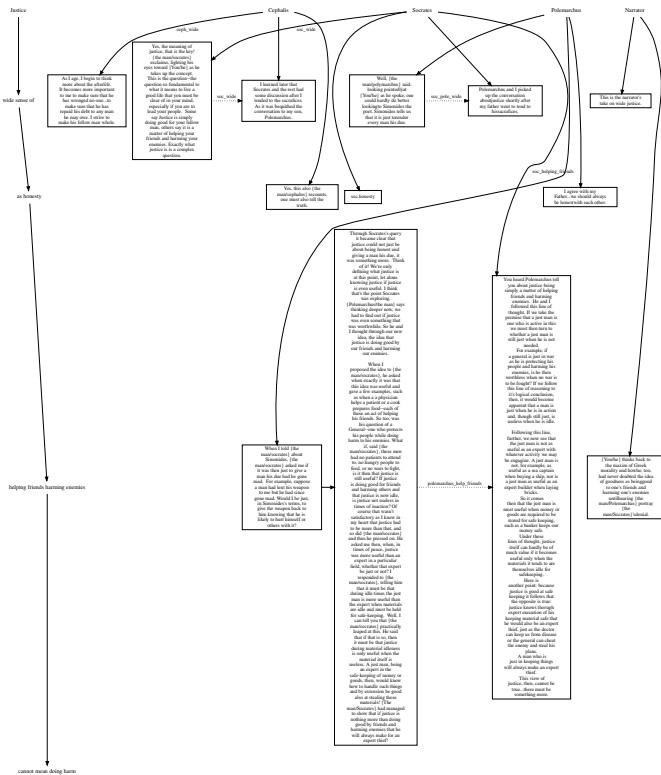


you have an idea for your work of Interactive Fiction. You’ve mulled the idea around for some time—now it’s time to start putting your thoughts on paper (or screen, as it were) but where to start?

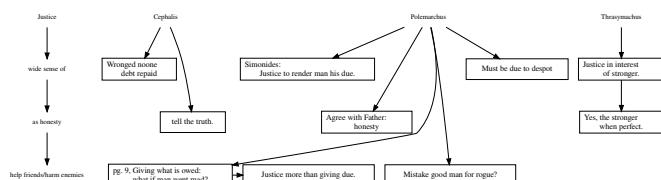
Ready, set, go!

Thoughts About IF

PLOTTING THE STORY LAYERS



CREATING A STORY BOARD goes a long way toward completion and enhancing coherence (Photo: COOPER STEVENSON).



MAPPING THE STORY, bit by bit, from source material. This simplified view depicts the plotting process; source page numbers references are helpful for later fleshing out your story. (Photo: COOPER STEVENSON).

EPILOGUE

Wishing You The
Best Until Next Time

IV

Epilogue

Where We Go From Here



IMAGINE YOUR READERS' FEELING knowing they tackled mind and matter to complete the Quest (Photo: D. COOPER STEVENSON).

"Ease of navigation is important in both physical and virtual space."

-John Quelch

UPDATES AND EXPANSION

This edition of *Discoverer's Digest* is necessarily a rolling release edition of the magazine. As Voltaire quotes the Italian proverb, "Don't let the perfect be the enemy of the good." In the next week or so I will update these articles with the specific code samples necessary to create the plots, etc. I described in the article. I feel this especially important as `IFCOMP` is hot underway; should I give just one author a spark of inspiration to improve his entry I will have considered this work a success.

UPCOMING ISSUE

In the next issue of *Discoverer's Digest* I tackle in concrete terms extended areas of `if` that are sometimes discussed but not, at least as far as I am aware, fully implemented.

First up brings the power of `TADS` to hook the "real world" into your work of `if`. Specifically I show an example and code for using `GPS` in your next adventure. For now I leave you with `THIS PARTIAL WALK-THROUGH` exploring a trail along Willapa Bay in Long Beach, WA.

Also, I'll build on the plotting I described in this issue to explore using Natural Language Processing to make "filling in the blanks" of your work faster, fuller, and comprehensive.

"ADIEU" & ADDITIONS

Your submissions of news, musings, or reviews/announcements of new works are always welcome. Simply `SEND ME A PERSONAL EMAIL` to submit.

Until next time (and as always), I wish you the best in your enjoyment of the medium!

Fair Winds,

D. COOPER STEVENSON