Discoverer's Digest

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GPS Enabled Trail Guide World Craft Techniques

ridging The Gap

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I

Interactive Fiction

A Lifetime Of Learning



 ${\tt PERHAPS}$ NOT SINCE written language itself have we had a method 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



SEARCHING EVERY feature for a step to the next challenge. (Photo: Tobias Helfrich)



The venerable Apple II/c hecomes an Oracle of logic. (Photo: Blake Peterson)

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 allcaps text. From the outside looking in, here sits an 11 year-old boy staring intently at the screen as he sits in a modern kneeling chair. His attentive posture and the fingers of both hands resting lightly on the keyboard indicate his total concentration.

From the inside looking out, I see my breath cloud across the face of my brass compass. I take my bearings in an otherwise pitch-black cave were it not for the lantern perched on a cold, wet slab of stone nearby over my right shoulder. I clasp shut my compass as I grasp my lantern and hold it higher to search my surroundings. I look with readied senses for details that might further my journey to the crest of my next discovery. Are there any inscriptions on the cave walls? Do I see evidence 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 me to discovery. 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 but 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 IN-TERVIEW that were he to think about IF he would probably have recognized his work as a new medium at the time. I humbly submit that what he may not have realized was that his spirit of sharing enriched a generation with a spirit of achievement 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 in 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.

WORK WITHOUT PURPOSE IS WORK WITHOUT MEANING

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.



INTERACTIVE FICTION



CYPHER, AN EXAMPLE work of modern interactive fiction (Photo: gameenthusiest.net)

All in all, I hope you enjoy this magazine and please feel free to submit questions, comments, submission ideas, etc. to COOPER@COOPER.STEVENSON.NAME.

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. Often before you're aware what's happening you find yourself focused on Encouraging others to experience a work of Interactive Fiction by helping them experience what the experience is like is what I hope most to bring out in this magazine. I hope most of all give the experience of a good story to all.

FAST TWITCH

Are we making forward progress, though? Does our technology really progress us to devise innovations in a world that requires mental model building of the challenge at hand? I wonder aloud whether we are providing the 'fast twitch' generation the thrill of achievement gained only through careful observation and thoughtful examination. I wonder if our search engines become increasingly our outboard brains. Have we marched forward our progress or have we introduced regressions?

Let's presume for the purposes of this article that deep thinking is preferable to fast twitching. I believe deep learning—in whatever form it takes—requires it's 'A' game to compete with instant gratification offered by social media, and first-person shooters. The good news is that what's good for the goose is good for the gander—freely available tools are good enough to rival commercial projects at a fraction of the budget.

There are several factors I believe are necessary to take us there:

BRIDGING

THE

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Techniques for crafting your world model

II

Bridging The Gap Techniques For Crafting Your World Model



This issue's letters to the editor... (Photo: Tom Walker)

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

-Henry Miller

MUSEUMS FOR THE MIND

- 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

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 discovers that his inquiry works anyway. Even if the interlocuture doesn'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 practicle sense, implicitely 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 solution 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 intellegently to reasonable inquiries by the player.

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.

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 prose based on the direction they're looking, varying descriptions each time, decorative scenes, and atmosphere—the little things that doesn't really add to the core of the work's message but certainly furnishes the world with just that little ounce of detail. 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:

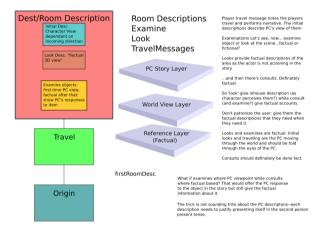
- The Reference Layer
- The World View Layer
- · The Story Layer

REFERENCE LAYER

The reference layer provides the interlocutor with background information about your world model to be looked up es 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/. 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 objecs 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, "just the facts, ma'am." 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.



WORLD VIEW LAYER

Moving up from the reference layer is the world view layer. This includes area/object descriptions, the interlocator's sense (sight, smell, touch, etc.) descriptions, and atmospheric spice sprinkled throughout the work.

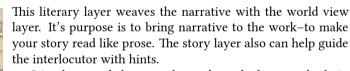
Thousands of pages are written on this topic. The overarching theme is generally this: keep your descriptions sharp,

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 summerizer at Wikipedia to boil down complex descriptions of an area to just a few sentances 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



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.

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



The READER IS GREETED with ancient proportions in The Acropolis (Photo: Joseph Kürschner)

up the walls where it glistens as tiny, fractured rainbows 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 facad 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 Proplyaea'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 Proylaea 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 Proylaea 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

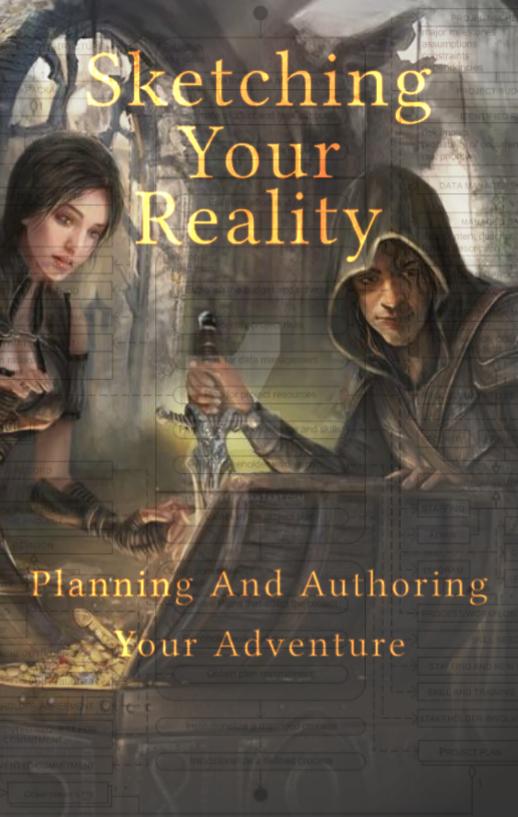
>look

Propylaea Steps

The Proylaea 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 dependant on direction of travel and the environmental messages I mentioned above you breath life into your story.



III

Sketching Your Reality Tips For Authoring



Planning your adventure doesn't have to be a slog—here are some tools to help (Photo: D. Cooper Stevenson).

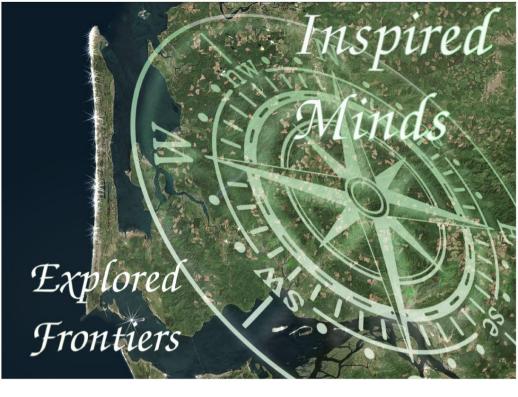
"Reality is merely an illusion, albeit a very persistent one.."

-Albert Einstein

REAL WORLD EXPERIENCE

This chapter presents the idea of using Interactive Fiction in the real world using a GPS enabled device. A working implementation is included.

Here is a walkthrough exploring a trail along Willapa Bay in Long Beach, WA.



IV

IF In The Real World

GPS-Enabled Adventures for Exploration



IMAGINE YOUR CONTENT knowing you 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

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