Open Domain Collaborative Storytelling With Say Anything

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Abstract
In this demonstration we present Say Anything, an open
domain interactive storytelling application where an author's
original story sentences are used to select subsequent
sentences from a corpus of millions of stories extracted
from Internet weblogs.

Demonstration: Say Anything
Interactive storytelling has become a rich area of research
for computer science, interactive-media and the learning
sciences. In this demonstration we will present our system,
Say Anything (Swanson and Gordon 2008). This
application uses a different approach from most interactive
storytelling systems in that it takes advantage of massive
amounts of weblog text to enable completely open domain
story generation.

Say Anything breaks from recent interactive storytelling
systems in its interaction model as well as its underlying
architecture. Unlike most current systems, which use rich
immersive 3D virtual environments, the interaction with
our system is purely textual. Although 3D virtual
environments offer many advantages and possibilities that
were not possible when research in this area first began,
there are still many reasons that textual environments have
significant value (Montfort 2007). In our system, a human
and computer interact by taking turns contributing
individual sentences of an emerging story. The human user
begins the story with the first sentence, which is continued
by the computer’s response. This process continues
cyclically until the user is satisfied (or sufficiently
dissatisfied) with their story.

The computer performs three major operations to
generate a sentence for the developing story. First, it
analyzes lexical and grammatical features of the user’s
story, including the most recently contributed sentence.
This analysis is then used to retrieve the most similar
sentence from a database of millions of stories collected
from Internet weblogs (Gordon et al. 2007). The measure
of similarity is based on standard information retrieval
techniques implemented in the Apache Lucene search
engine (Gospodnetic and Hatcher 2004). The system then
selects the next sentence in the story where the retrieved
sentence appears. In addition to this sentence, the user is
also presented with nine other sentences that follow from
the next most similar sentences, which they can choose
from using a drop-down menu. Alternatively, if none of the
sentences are satisfactory to the user, they may opt to
remove it completely and continue the story by writing
another sentence themselves. On the other hand if the user
is pleased with the direction the computer is taking the
story they can allow the computer to continue generating
sentences, one at a time. See Figure 1 for an example story
written by one of our users.

Our system is collaborative in the sense that the user and
computer are working together to create a single story. It is
also collaborative in the sense that our database consists of
stories from hundreds of thousands of weblog authors who
contribute a small piece to each new story created by our
system. Keeping with this collaborative spirit we chose to
use a web interface for our system in hopes of spurring a
community that can write, share and rate each other’s
stories. See Figure 2 for an illustration of the main writing
interface page of our system.

In the demonstration of our system we will allow users
to author their own original stories in real time. In addition,
the users will be able to explore the features we have
implemented to try to foster a web-based community
around this type of simple storytelling game.

References
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Massively Collaborative Open Domain Story Writing
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It all started easy enough.

But then I noticed something very strange.

Why would he do that? What was he up to?

I decided to get to Sonya first and run away with her to a Greek island.

But we settled for Corfu, which has a beautiful little hotel on the edge of the old town.

Corfu was full of cats and dogs, and I ended up having to look at my feet a lot when walking around town.

Sonya would take on the secret identity of a scuba instructor, and I’d be a fisherman.

It meant we could spend a lot of secret time together on the jetty beyond the coastline.

I told her I’d kill them just like that old math teacher.

Fishing all day, looking out for the police.

It was a great secret life.

Mr. Sipiera gave me points on the blank page.

Because he was planning to kill Sonya for her knowledge of the kidnapping plot.

Our original plan to go to Lamma island was ditched, as we had inadvertently spent half the day on Lantau island.

We had dogs (and cats) when I was growing up but my wife and sons have never had a dog before.

It's too long to list the details of the whole operation.

"Before I even got so far as having a proper breakdown in realizing that fantasy is not reality, I found that I had the secret identity of a beetle."

"But that could have been very useful, right?"

"I have some of the men she hangs with have come on to her."

"Once she's gone, I'm pretty much on my own."

"If they stopped to survey the situation they could only see what was there -- none of the men were armed."

Figure 1: An example story written with the system showing the turns explicitly along with the matching sentences.

Figure 2: The main writing interface page. The user can write a new sentence, change a computer generated sentence or allow the computer to continue generating sentences.