The meta macro package

This is a very simple, noddy example of how to use the **meta** macro package. It's not intended to be a reference (there currently isn't one).

meta is supposed to be a modern macro package for the *troff* typesetter. While it's currently very basic, it supports such things as named paragraph and character styles, arbitrary graphics drawing, flexible fonts, etc. Mostly it was written because I (the author) wanted something simple to write text in, and neither LaTeX or HTML cut it.

Here's an example of a user-defined paragraph style, the **SANSPARAGRAPH** one. All paragraph styles are nestable, as this...

> ...example shows. (This is the **INDENTPARAGRAPH** style.)

And here we are back with **SANSPARAGRAPH**. All I did was close of the **INDENTPARAGRAPH** style; **meta** remembered the old style.

And here I've closed **SANSPARAGRAPH** and you can see I'm back with the default text style. You're recommended to look at the source file for details.

meta works well with Postscript and DVI. (This document was rendered into Postscript.) I'm working on getting it working with plain text and HTML. Plain text is passable, but HTML is a complete hash.

Also supported are minipages. These are rectangular regions of the page that can be treated as miniature pages. For example, the footer below is implemented as a minipage. Headers can be done this way, too.

Here are some of the standard paragraph styles.

A heading

That was a **HEADING**.

A subheading

That was a **HEADING1**.

A subsubheading

And that was a **HEADING2**. Currently in the works are automatically number headings, and better control over the paragraph spacing so some white space can be inserted after the headings above. (White space can be inserted before with the `.PARASPACING` macro.)

The real purpose behind **meta** is to be able to enter big blocks of text in ASCII and have it be typeset nicely, with minimal user intervention. For example, paragraphs in **meta** are delimited by blank lines. As an example, here is a few pages from *Tom Swift and His Undersea Search*, a less than excellent novel randomly chosen from the totally excellent Project Gutenberg. This text was pasted in verbatim from the ASCII source.

"Tom, this is certainly wonderful reading! Over a hundred million dollars' worth of silver at the bottom of the ocean! More than two hundred million dollars in gold! To say nothing of fifty millions in copper, ten millions in--"

"Say, hold on there, Ned! Hold on! Where do you get that stuff; as the boys say? Has something gone wrong with one of the adding machines, or is it just on account of the heat? What's the big idea, anyhow? How many millions did you say?" and Tom Swift, the tal-

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ented young inventor, looked at Ned Newton, his financial manager, with a quizzical smile.

"It's all right, Tom! It's all right!" declared Ned, and it needed but a glance to show that he was more serious than was his companion. "I'm not suffering from the heat, though the thermometer is getting close to ninety-five in the shade. And if you want to know where I get 'that stuff' read this!"

He tossed over to his chum, employer, and friend--for Tom Swift assumed all three relations toward Ned Newton--part of a Sunday newspaper. It was turned to a page containing a big illustration of a diver attired in the usual rubber suit and big helmet, moving about on the floor of the ocean and digging out boxes of what was supposed to be gold from a sunken wreck.

"Oh, that stuff!" exclaimed Tom, with a smile of disbelief as he saw the source of Ned's information. "Seems to me I've read something like that before, Ned!"

"Of course you have!" agreed the young financial manager of the newly organized Swift Construction Company. "It isn't anything new. This wealth of untold millions has been at the bottom of the sea for many years--always increasing with nobody ever spending a cent of it. And since the Great War this wealth has been enormously added to because of the sinking of so many ships by German submarines."

"Well, what's that got to do with us, Ned?" asked Tom, as he looked over some blue prints and other papers on his desk, for the talk was taking place in his office. "You and I did our part in the war, but I don't see what all this undersea wealth has to do with us. We've got our work cut out for us if we take care of all the new contracts that came in this week."

"Yes, I know," admitted Ned. "But I couldn't help calling your attention to this article, Tom. It's authentic!"

"Authentic? What do you mean

"Well, the man who wrote it went to the trouble of getting from the ship insurance companies a list of all the wrecks and lost vessels carrying gold and silver coin, bullion, and other valuables. He has gone back a hundred years, and he brings it right down to just before the war. Hasn't had time to compile that list, the article says. But without counting the vessels the Germans sank, there is, in various places on the bottom of the ocean today, wrecks of ships that carried, when they went down, gold, silver, copper and other metals to the value of at least ten billions of dollars!"

Tom Swift did not seem to be at all surprised by the explosive emphasis with which Ned Newton conveyed this information. He gazed calmly at his friend and manager, and then handed the paper back.

"I haven't time to look at it now," said Tom. "But is there anything new in the story? I mean has any of the wealth been recovered lately--or is it in a way to be?"

"Yes!" exclaimed Ned. "It is! A company has been formed in Japan for the purpose of using a new kind of diving bell, invented by an American, it seems. The inventor claims that in his machine he can go down deeper than ever man went before, and bring up a lot of this lost ocean wealth."

"Well, every so often an inventor, or some one who calls himself that, crops up with a new proposal for cleaning up the untold millions on the floor of the Atlantic or the Pacific," replied Tom. "Mind you, I'm not saying it isn't there. Everybody knows that hundreds of ships carrying gold and silver have gone down in storms or been sunk in war. And some of the gold and silver has been recovered by divers--I admit that. In fact, if you recall, my father and I perfected a new style diving dress a few years ago that was successfully used in getting down to a wreck off the Cuban coast. A treasure ship went down there, and I believe they recovered a large part of the gold bullion--or perhaps it was silver.

"But this diving bell stunt isn't new, and it hasn't been successful. Of course a man can go down to a greater depth in a thick iron diving bell than he can in a diving suit. That's common knowledge. But the trouble with a diving bell is that it can't be moved about as a man can move about in a diving suit. The man in the bell can't get inside the wreck, and it's there where the gold or silver is usually to be found."

"Can't they blow the wreck apart with dynamite, and scatter the gold on the bottom of the ocean?" asked Ned.

"Yes, they could do that, but usually they scatter it so far, and the ocean currents so cover it with sand, that it is impossible ever to get it again. I admit that if a wreck is blown apart a man in a diving bell can perhaps get a small part of it. But the limitations of a diving bell are so well recognized that several inventors have tried adjusting movable arms to the bell, to be operated by the man inside."

"Did they work?" asked Ned.

"After a fashion, yes. But I never heard of any case where the gold and silver recovered paid for the expenses of making the bell and sending men down in it. For it takes the same sort of outfit to aid the man in the diving bell as it does the diver in his usual rubber or steel suit. Air has to be pumped to him, and he has to be lowered and raised."

"Well, isn't there any way of getting at this gold on the floor of the ocean?" asked Ned, his enthusiasm a little cooled by the practical "cold water" Tom had thrown.

"Oh, yes, of course there is, in a way," was the answer of the young inventor. "Don't you remember how my father and I, with Mr. Damon and Captain Weston, went in our submarine, the Advance, and discovered the wreck of the Boldero?"

"I do recall that," admitted Ned.

"Well," resumed Tom, "there was a case of showing how much

trouble we had. An ordinary diving outfit never would have answered. We had to locate the wreck, and a hard time we had doing it. Then, when we found it, we had to ram the old ship and blow it apart before we could get inside. Even after that we just happened to discover the gold, as it were. I'm only mentioning this to show you it isn't so easy to get at the wealth under the sea as writers in Sunday newspaper supplements think it is."