BEING CONCISE

SUMMARIZING THE SUMMARY

LIMITED EDITION

GRADX.MIT.EDU
Two Ways to Start Sentence After $A \rightarrow$
As an undergrad, I had to write papers.

I'd sit down, and after several hours of writing, probably only really had 3-4 pages worth of material.

Then I would have to stretch it into 8-10 pages.

So I'd repeat words and add gratuitous modifiers;

Top scientist
World-renowned researcher in the field of computer science

Play around with font size & margins... Create long complex sentences replete with subordinate clauses... Include a diagram of some sort... etc.

Abstract

With the explosion of research academic bioinformatics, there is an increase in sequencing algorithms, and mass spectrometry. A possible tool for aiding...
Nowadays, page limits are a different kind of problem. It's no longer an issue of padding my material to reach a minimum threshold.

Instead, I've got to find ways to condense the material down to a maximum cut-off.

This ability to write concisely and still be clear and cohesive is what we're aiming for.
IN TODAY'S WORLD OF TWEETS, TAGLINES AND TL;DR, ATTENTION SPANS ARE SHORT.

TOO LONG; DIDN'T READ

From: tony@mit.edu
To: tim@mit.edu
Subject: Swap slots?
Can we swap my next Tuesday slot for your upcoming Thursday slot? -T

SHORTER EMAILS ARE MORE EFFECTIVE AT GETTING A REPLY.

SHORTER VIDEOS ARE MORE EFFECTIVE AT GETTING WATCHED.

30 Seconds Long
1. Remember
2. Rhetorical
3. Rules

*This is a rule of three alliteration in action.
Fourth, for clarity and flow, I've gotten a lot of mileage from two ideas due to George Gopen:

Two of George Gopen's Ideas

**Topic Changing**
Start the next sentence with the idea that ended the preceding sentence.

A → B
B → C
C → D
D → E

**Topic Stringing**
Start the next sentence with the same idea that started the preceding sentence.

A → B
A → C
A → D
A → E
Finally, I iterate.

I go through a series of rewrites until I reach a “fixed point” - i.e. the text doesn’t change anymore.

Now comes the interesting part!

What happens with each rewrite?
First, I often write the way I speak.

Second, I try to be more direct and to the point.

Third, I employ rhetoric (such as the rule of three and alliteration).

I apply the inverse function to my method, described earlier, for expanding text. I remove empty words and phrases that don’t add much, also.

And I rephrase sentences, and I can.

All the while preserving the essence of the main idea.
In short, each rewrite is a summary of the previous version.

And this is something we're all used to doing.

The subject line of an email is a summary of the contents of that email.

The title of a slide is a summary of the contents of that slide.
**Title**

De Novo Peptide Sequencing from MALDI-TOF PSD Spectra.

**Abstract**

With the explosion of research activity in bioinformatics, there is an increased demand for accurate algorithms, and mass spectrometry is often used as a possible tool for aiding in the process. Sequencing from tandem mass spectra relies on either some form of comparison to a database of known peptides, or manual sequence inference by human analysis of spectra. Such approaches encounter difficulties when presented with the spectra of unknown and novel proteins not cataloged in a database, or with complex spectra that do not easily lend themselves to manual interpretation. Thus, no approaches exist but their performance is sensitive.

**Introduction**

The complete genetic sequences of more and more organisms are being rapidly enumerated, and the genetic coding regions quickly deciphered. Structural and functional genomics, the discovery of a polypeptide's shape and purpose, becomes the next phase towards understanding the genetic program. Often the initial efforts in these areas require knowledge of a protein's sequence.

Proteins are essential to life, playing key roles in all biological processes: from enzymes that catalyze reactions, to antibodies in an immune response, from messengers in signaling pathways that allow a cell to react to stimuli, to secreted messengers that effect extracellular changes, and much more. Such is the extent of protein functionality to the survival of any organism.

One of the first steps in understanding a protein is discovering its primary structure. Knowledge of the primary sequence characterizes the protein, offering a glimpse of what it does (its role and functionality), where it (its targeted destination) and how it does it (its active sites and structural motifs). Protein sequencing is the process by which...
IF I WERE TO APPLY THIS TO THE START OF THIS COMIC, HERE'S WHAT I WOULD GET:

AS A STUDENT, I WROTE PAPERS.

THESE PAPERS HAD PAGE LIMITS.

BUT FOR AN 8-10 PAGE PAPER, I PROBABLY ONLY HAD 3-4 PAGES WORTH OF STUFF.

SO I FOUND WAYS TO PAD IT.

TOP SCIENTIST
WORLD-RENOWNED RESEARCHER IN THE FIELD OF COMPUTER SCIENCE

NOWADAYS, PAGE LIMITS ARE A DIFFERENT PROBLEM.
It's no longer padding material to reach a minimum threshold, but—condensing it to meet a maximum cut-off.

I had to learn to write concisely, clearly and coherently.

In today's world of tweets, taglines and TL;DR, attention spans are short.

Shorter emails get read.

Shorter videos get watched.

From: tony@mit.edu

tim@mit.edu

Swap slots? On my next Tuesday slot for your Thursday slot? -T
HOW DOES ONE WRITE EXPRESSIVELY YET ECONOMICALLY?

NOW, IF I WERE TO THEN SUMMARIZE THIS SUMMARY, I'D GET:

CONCISION
IT USED TO BE THAT FOR AN 8-10 PAGE PAPER,

I ONLY HAD 3-4 PAGES WORTH OF STUFF AND HAD TO FLUFF THINGS UP.

NOWADAYS, I HAVE TOO MUCH TO SAY & NEED TO CONDENSE THINGS DOWN.

OUR GOAL TODAY?

TOP SCIENTIST
WORLD-RENOOWNED RESEARCHER IN THE FIELD OF COMPUTER SCIENCE

CONCISSION WITH CLARITY AND COHERENCE.

ESPECIALLY BECAUSE ATTENTION SPANS ARE SHORT.

HOW DO YOU WRITE EXPRESSIVELY YET ECONOMICALLY?

HERE'S WHAT I DO.
Chapter 1: Introduction

The complete genetic sequence of more organisms are being deciphered at a rapid rate. Structural and functional genomics, the decoding of gene functions, becomes the next phase towards understanding the genetic program. Knowledge of a protein's sequence.

Proteins are essential to life, playing key roles in all biological processes. Antibodies in an immune response, messengers in signaling pathways, and many more. Such survival of any organism.

One of the first steps in understanding a protein is its primary sequence. The primary sequence characterizes the protein, often containing the information necessary for the final proteins of cells (and how it does its jobs). This is the foundation of all protein-based diseases.

A protein can be easily sequenced using the methods at hand. On the other hand, the genomic DNA were available with some certainty because post-transcriptional and translational modifications occurring in the genome sequence. If, however, one were to want to know how correctly a protein might find sequence information by protein database, library or sequence.
THEN

REPEAT.
Gradx is a project that seeks to expand access to professional development to all MIT graduate students and faculty. Its first offering, Gradcommx (both an online & live course availability TBA), will focus on communication skills for graduate students.

**Design Principles**

Pedagogical design principles strive to make the course simple in concept, complex in practice; customizable to student needs; connected to resources via links and gateways to other MIT resources and services; and featuring differentiated approaches to increase comprehension.

Teaching materials can be adapted by faculty to any population.

**Components**

Gradx consists of a series of learning experiences that are fun and user-friendly. These elements include:

- Comics
- Instructor Lectures
- Podcasts
- Expert Interviews
- Activity Prompts
- Research Exercises
- And more!

**Topics Covered**

1. **Choosing appropriate language** to avoid overwhelming your audience
2. **Using narrative** to explain why your research is important
3. **Synthesizing prior work** to convey where yours fits in by highlighting differences
4. **Controlling focus** in order to minimize cognitive load when presenting data
5. **Leaving time** for an audience to process when explaining how something works
6. **Distilling your message** when time & attention spans are short

Find out more at: [gradx.mit.edu](http://gradx.mit.edu)