

IP: Scientific Evidence Seminar  
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## Tips on Reformatting

PURPOSE: We reformat claims so that we can understand them.

WHAT IS REFORMATTING (SHORT ANSWER)?

Reformatting a claim is like diagramming a sentence, except that:

1. the subject and verb of the sentence (words such as "What is claimed is" that precede the list of claims) are omitted,
2. the rest of the sentence is written in a style that nobody uses except in patent claims, and
3. the rest of the sentence is usually long and complicated.

WHY BOTHER?

Most of us tend to be visual thinkers at least some of the time. That means we benefit from a presentation of text in which the position of the words reflects the relationships between concepts. Even lay jurors and not-technically-inclined judges (and their similarly-NTI clerks) will be influenced, if only subconsciously, by seeing claim language presented in a visually helpful manner.

WHAT ARE THE BENEFITS TO THE READER?

Speed, efficiency and pain reduction. It is easier to understand a reformatted claim, or any complicated language such as a statute or regulation, than it is to understand the same text in run-on block format. That is why back in law school I invented reformatting. The tax code made me do it.

Reformatting breaks the text down into short phrases. That alone can be helpful, but reformatting does more: It uses the horizontal starting position of each phrase to show its relationship to other phrases. One phrase may modify another, it may be in parallel with several others, it may be subordinate to something else, it may relate back to something mentioned many lines before, etc.

WHAT ARE THE BENEFITS TO THE REFORMATTER?

The reformatter is forced to read with care. The process confers self-discipline. You cannot reformat unless you read every word. Once you begin to reformat, you start to notice which words are repeated, which phrases are most freighted with modifiers, etc. Those nuances can be hard to detect in block form text unless you concentrate deeply. The task of reformatting motivates you to pay attention and makes it easier to do so.

## HOW TO REFORMAT

Start with the text of the claim. If the claim is already broken down into paragraphs, and/or has numerals or indenting, go ahead and use them, at least at first. But do not rely on the formatting in the patent. It may be misleading and it can always be improved.

Sometimes students think that reformatting simply means tabbing each phrase further to the right than the previous one. No. Some phrases go left quite a bit relative to the previous one. You have to think about every phrase. **If you approach reformatting as something to do by rote, you will do it wrong. Worse, you will learn much less about the claim than you ought to.**

Use the example in this document as a template or:

- Set the tabs on your wordprocessor document to 0.3 or so. That way you have plenty of room to tab multiple times and still have room for text. (I also tab between a numeral or other symbol and the text, so that the numerals are visible and the resulting appearance is orderly.)
- Use a monowidth font (the kind that looks like a typewriter) so that things will always line up.
- Choose a font that is small enough. I have used Courier 9 pt. (If that's too small for you, use a larger font and set the page to landscape.)

Once your template is ready, copy the claim text and start reading the words.

SOME BASIC RULES OF REFORMATTING  
(ANY OF WHICH CAN BE BROKEN FOR GOOD CAUSE)

Skim these rules. If you learn better by example, skip right to the example, study it, and then come back and see which rules I followed and which I broke.

**A. Modifiers.** Every time you find something that modifies a previous thing\*, tab it once to the right from the previous thing's position. (\* a thing is a word or a phrase.)

**B. Parallel Concepts.** Every time you find two things that are in parallel, place them at the same tab stop. Tip-offs that things are in parallel are:

- they begin with the same preposition (on, for, to, etc.);
- they begin with the same verb form, such as an infinitive (e.g., to dance, to sing, to laugh) or participle (e.g., baking, cooking, playing the piano);
- they share some other grammatical feature;
- they are connected with commas and/or with 'and' or 'or.'

**C. Unimportant Words (the Ellipsis Rule).** Every time you find a less important phrase, one that you might want to eliminate and

replace with ellipsis if you were arguing about the words on either side of it, indent the less important phrase relative to the surrounding phrases. Then check that what you have done makes sense grammatically. Do this by reading the claim aloud without the more-indented phrase.

**D. Conjunctions; Lists.** Often, phrases connected by "AND" should begin at the same tab. When list items are likely to be controversial individually, place them one on a line, each starting at the same tab. (If they are ignorable, however, leave them together.) Adjacent phrases that begin "from" and "to" should start at the same tab. And so on.

**E. Original Formatting and Enumerating.** Retain numerals and letters in the original and add symbols as needed to facilitate discussion of your claim. Text at the same tab stop should have the same kind of symbol; text farther to the right should have a lesser symbol. Standard outlining symbols, such as A-1-a-(1) work fine. Increasing dashes (e.g., -, --, ---) work well for subsidiary matters, too, as long as the stream of dashes does not extend to the next tab. (I avoid roman numerals because they have different numbers of characters. After all, the whole point of the exercise is to make a visually helpful version of the text.)

**F. Length.** Try to have each phrase take no more than one line. If a two-line phrase needs to stay together, use hard returns and separate tabbing for each line to make the reformatting portable for slides and other presentations.

#### AN EXAMPLE

Here is claim 1 of 5,820,594, the patent-in-suit in *BSC v. Cordis*, the trial that seminar students attended in 2007. This is how the claim appears in the patent:

1. An intravascular balloon catheter, comprising:

a flexible balloon disposed near a distal end of the catheter; and

a flexible catheter shaft defining an inflation lumen and a guidewire lumen, the inflation lumen providing fluid communication between an inflation port and the interior of said balloon, and the guidewire lumen adapted to slidingly accept a flexible guidewire and extending from a proximal guidewire port to a distal guidewire port;

a portion of said catheter shaft incorporating a flexible plastic tube defining said guidewire lumen, said tube having an outer plastic layer and an inner plastic layer, said inner plastic layer being formed of a copolymer of a major amount of high density polyethylene and a minor amount of an unsaturated carboxylic acid or an anhydride thereof, the material of said outer plastic layer being selected from the group consisting of nylons polyurethane, and polyester;

wherein the inner plastic layer exhibits lower surface friction than the outer plastic layer, the plastic materials of said outer and inner plastic layers being different, and chemically bonded to each other in direct and continuous contact.

We begin with the paragraph divisions in the claim as issued. There are four paragraphs and I'll discuss them here as if they

were explicitly numbered 1 to 4. I will NOT use those numbers in my reformatting, however, because I can see at a glance that these four paragraphs are not conceptually equal. (By that I mean they do not address concepts of equal weight. For example, arms and legs are conceptually equal as body parts, but toenails and elbows would not be equal to arms and legs nor would they be equal to each other.) To understand the relative weights of words and phrases in a patent claim, we must read and think carefully.

The first 2 paragraphs define the catheter as having 2 parts: a balloon and a shaft. That means that the first words of those two paragraphs should be at the same tab stop. I would insert [A] and [B] as well, to show that these are the two parts of the catheter.

Paragraph 3 defines "a portion of the catheter shaft." It modifies [B] and should therefore be indented once from where [B] starts.

Paragraph 4 begins "wherein," a word patent lawyers use often. A "wherein" clause further limits something that precedes it, but not necessarily the immediately preceding thing. That's because the "wherein" clause may be added by amendment. We can discuss this in class.

I place the "wherein" paragraph at the primary tab stop of whatever it modifies. Here it modifies "inner plastic layer," a term that is deep in paragraph 3. Since I haven't finished formatting paragraph 3, I can't position paragraph 4 yet.

Let's see what we have so far, using some ellipsis (...) to illustrate more compactly the relationships in this example. You, however, will have to **include every word** when you submit your reformatted claim 1.

The tab stops are:

```

. . . . .
1.  A ... catheter comprising
    [A] a ... balloon ...; and
    [B] a ... catheter shaft ...
        - a portion of said catheter shaft incorporating
            ...
            ??? wherein??? {tab stop unknown} ...

```

Now let's concentrate on part [A]. It is pretty short: "a flexible balloon disposed near a distal end of the catheter." The phrase starting with the verb "disposed" modifies the noun "balloon." This verb phrase describes the position of the noun "balloon" and could easily be omitted if our main focus was not on the balloon but on the catheter. (See Ellipsis Rule, above). All of this suggests that "disposed ..." should be indented to the right of "balloon." I say "suggests" because reformatting is not an exact art and a reformat for one purpose -- or one party to a lawsuit -- may not work for another purpose -- or the opposing party.

If we anticipate that part [A] will be ignored in any subsequent discussion for which this claim chart will be used, we could just reformat it as:

```
[A] a flexible balloon
      disposed near a distal end of the catheter
```

If we know of controversies, we might prefer:

```
[A] a flexible balloon
      - disposed
        near a distal end
        of the catheter
```

Paragraph [B] explains the second part of the catheter: the shaft. The shaft has two parts, two LUMENS (tubes, to the lay person). These two parts are 'equal' so they should begin at the same tab. Thus:

```
[B] a flexible catheter shaft defining
      - an inflation lumen and
      - a guidewire lumen, ...
```

The next phrase defines the INFLATION lumen. True, a better writer might have inverted the order of the two lumens, so that the discussion of the inflation lumen was adjacent its first mention. **But we do NOT have the liberty of moving a single word or punctuation mark in a patent claim. The language of the claim, for claim chart purposes, is etched in stone.** We are stuck with it just as we are stuck with the words of statutes and Constitutions. That is another reason that reformatting is so important.

A modifying phrase should be positioned one tab to the right of what it modifies. What are we told about the inflation lumen? First we are told that it does something: It "provid[es] fluid communication." Then we are told that the communication is "between" two things. "Between" tells us that the next items are parallel because they both physically bracket whatever lies "between." Thus:

```
-- the inflation lumen
   --- providing fluid communication between
       ---- an inflation port and
       ---- the interior of said balloon
```

The conjunction "and" is another tip-off that there are two things that should be positioned at the same tab.

Another visually appealing but vertically space-hogging way is to put the "between" and the "and" by themselves at the same position as the thing modified so that you can see at a glance what the objects of "between" are. I would do this if the "between" clause were of crucial importance.

```
--- providing fluid communication
    between
      an inflation port
    and
      the interior of said balloon
```

Next the claim speaks of the GUIDEWIRE lumen. Therefore the phrase should begin one tab to the right of wherever we heard about the guidewire. What to do with the "and"? I do different things at different times, but in this case I place the "and" at the position for anything that modifies EITHER lumen, thus, all at the same stop:

```
[explanation of INFLATION lumen]
and
[explanation of GUIDEWIRE lumen]
```

The guidewire explanation has two ideas: the lumen is "adapted to" do something, and also "extend[s]." Or anyway I think that the "lumen" is what "extends," rather than the closer noun phrase, the "flexible guidewire." Once I am sure, I arrange things visually so that the reader will not be troubled by the ambiguity. This is another benefit to reformatting.

We also have the words "from" and "to." The prepositional phrases are equals, grammatically speaking, just like the two objects of "between." The reformatting will make this apparent.

Let's combine all these ideas to show a finished version of paragraph 2:

```
[B] a flexible catheter shaft defining
- an inflation lumen and
- a guidewire lumen, ...
  -- the inflation lumen
     --- providing fluid communication
         between
             an inflation port
         and
             the interior of said balloon,
  and
  -- the guidewire lumen
     --- adapted to slidingly accept a flexible guidewire
         and
     --- extending
         from a proximal guidewire port
         to a distal guidewire port;
```

Reformatting is not an exact science. Many things are judgment calls. For example, I might remove some hard returns, depending on what is non-controversial, but always keeping in mind the ellipsis rule. The reformatting above assumes that the inflation lumen's characteristics are important. When I quote the claim later, if I am not interested in the guidewire, I can write:

```
1. An intravascular balloon catheter, comprising:
...
[B] a flexible catheter shaft defining
  1. an inflation lumen ...
     providing fluid communication *
         between
             an inflation port
         and
             the interior of said balloon...
```

\* Note that I don't have to repeat "the inflation lumen" when I delete language preceding the repetition of these words.

Paragraph 3, as we said, modifies "catheter shaft" so I will begin it one tab to the right of the first appearance of that

phrase. I won't explain all my thinking here, and you may well have some disagreements with my decisions, but here is a first pass for the reformatting of paragraph 3, without any numerals or symbols this time:

```

a portion of said catheter shaft incorporating
  a flexible plastic tube
    defining said guidewire lumen,
  said tube having
    an outer plastic layer
  and
    an inner plastic layer,
    said inner plastic layer
      being formed of a copolymer of
        a major amount of high density polyethylene
      and
        a minor amount of
          an unsaturated carboxylic acid or
          an anhydride thereof,
    the material of said outer plastic layer
      being selected from the group consisting of
        nylons
        polyurethane, and
        polyester;

```

Paragraph 4 might be reformatted as follows, inserting dashes and an "and" where I think they help:

```

wherein
  the inner plastic layer exhibits
    lower surface friction
  than
    the outer plastic layer,
  [and]
  the plastic materials
    of said outer and inner plastic layers
  being
    -- different, and
    -- chemically bonded to each other
      in direct and continuous contact.

```

The rightward tabbing of "of said outer ..." is consistent with the ellipsis rule and reflects my guess that the phrase of interest is probably  
 "the plastic materials ... being ... chemically bonded to each other ..."

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Note also that I have added the word "and." What happened to the idea that claim language is not to be tampered with, it is "etched in stone"? To facilitate smooth reading, I permit myself the addition of the "and." That is not a substantive change, at least not in this case. I imagine that the addition of an "and" could be highly controversial sometimes, however.

Please email me with any questions.