



# Text2PTO

## Modernizing Patent Application Filing

A Proposal for Submitting Text Applications  
to the USPTO

June 14, 2012



# The Big Picture

- The USPTO is building a new, **modern patent examination** software system
- One part of this is modernization is looking at **how patent applications are filed**
- Applicants will receive many **benefits** from this with **minimal changes** in their existing work practices



# Main Goal

Provide a safe, easy way for applicants to file the **text** version of their patent applications online



# Benefits

- Increased **accuracy** of application processing
- Automated **formalities** checks
- Additional useful automated information
  - **Analytic Reports**
  - **Claims trees**
  - **Patent family** information
- Will enable **better tools for patent examiners**
- Will increase **efficiencies for USPTO & Applicants**

My Case List Case Viewer 0.0.10-SNAPSHOT 5521 Hello, John Doe Feedback Help

Layout Examine Merits 90/009528 - Pressure Protection Manager System & Apparatus

Case Contents Case Data

Case Number 90/009528  
 Title Pressure Protection Manager System & Apparatus  
 Status Ready after Non-Final

Applicant/Owner

Inventor Kenneth Schofield, Holland, MI  
 Inventor Mark L. Larson, Grand Haven, MI  
 Inventor Keith J. Vadas.

Drawings

Specification 09/07/1999 Search Within Case

computer

Filter All types All phases All dates Previous searches Search

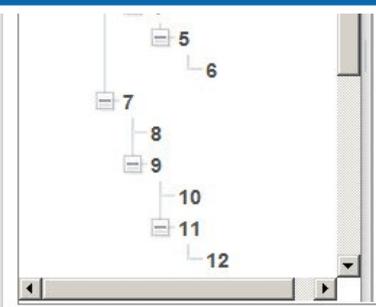
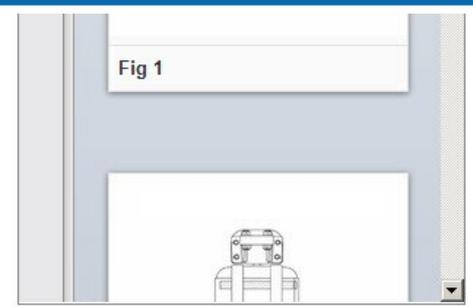
computer | All types | All phases | All dates  
 6 results found: 4 Incoming, 2 Outgoing, 0 Prior Art Turn Snippets Off

Incoming documents from applicant/requestor (4)

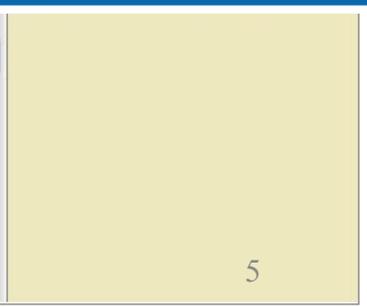
Description	Date	Rank
Specification Background The invention relates to a test administration system that integrates paper and computer-based testing processes. Conventional testing systems may be computer-based ~r paper-based. In some		1
Claims A computer, comprising: a fixed casing accommodating a first computer component and having an opening; a movab		2
Claims A computer, comprising: a fixed casing accommodating a first computer component and having an opening; a movab		3
Claims		4

Patented Claims

# Modern Software for Patent Examiners



covering said opening of said fixed casing, said movable casing having a tab protruding from said movable casing, said movable casing accommodating a second computer component on an inner surface of said movable casing: a pair of hinges rotatably coupling said





# Focus: Ease of Use for Applicants

- Eliminates the need to:
  - **Scan** or pdf the file
  - Upload **four different files** & figure out the number of pages for each file
- **Amendments** can be **made on a copy** of the original
  - Amendments can be authored using “Track Changes”
  - **Cover sheet** can be conveniently added for you
- **No software to download or install**

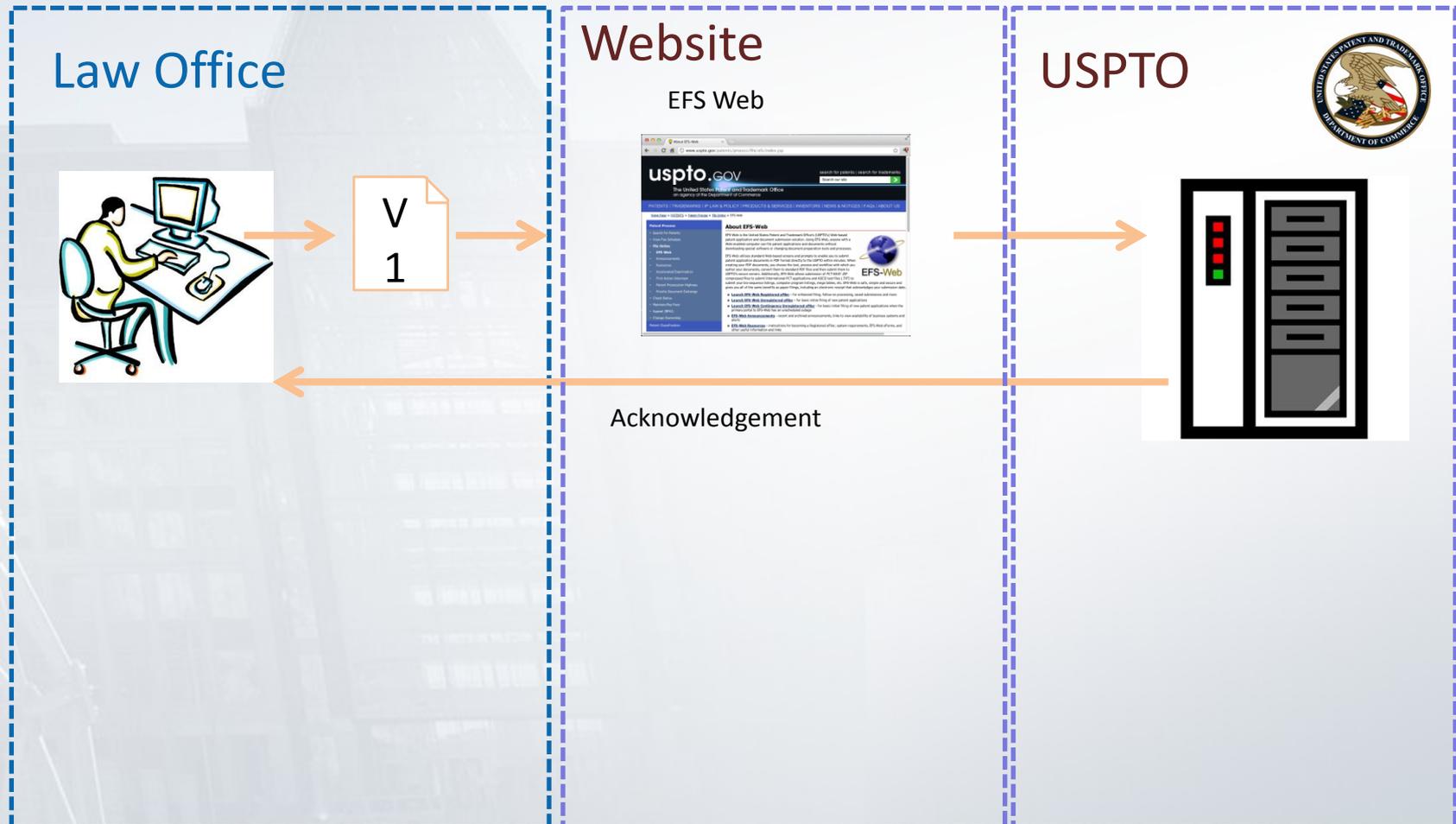


# MAIN IDEA

Author your application in MS Word, and then run it through the validator



# Author your application in Word, and then upload it to USPTO.





# Applicants' Concerns

- What if we left **track changes** on?
  - USPTO is providing an online validation process that will show you when this happens, and allow you to turn them off.
- What if we left **private information** in the file?
  - The validation process will assist you to identify and remove private information.
- How can we be sure the **contents** of the application **have not changed** during filing?
  - USPTO will providing a unique code that allows you to easily and quickly verify that we have a verbatim copy of the text that you submitted.



# VALIDATION WIZARD, PART 1

Overview of a clean application submission



# An overview of a error free validation

The screenshot shows the "PATENT APPLICATION VALIDATION" web interface. At the top, there is a header with the United States Patent and Trademark Office logo and the text "United States Patent and Trademark Office An Agency of the Department of Commerce". Below the header, there is a navigation bar with "Home" and "About" links. The main content area is titled "Patent Application Amendment Validation Status" and displays a list of validation checks, all of which are marked with a green checkmark: "Patent Application Parts and Contents", "Tracked Revisions", "Comments", "Document Properties and Personally Identifiable Information", "Fonts", "Bookmarks", "Text Formatting", and "Invalid Other Content". To the right of the list, there is a button labeled "Review Locations of Parts and Content". Below the list, there is a box showing "0 Errors" and a button labeled "Generate Hash Code and Save".

This illustrates an application specification that has passed successfully through all validation checks using the prototype validation wizard.



# VALIDATION WIZARD, PART 2

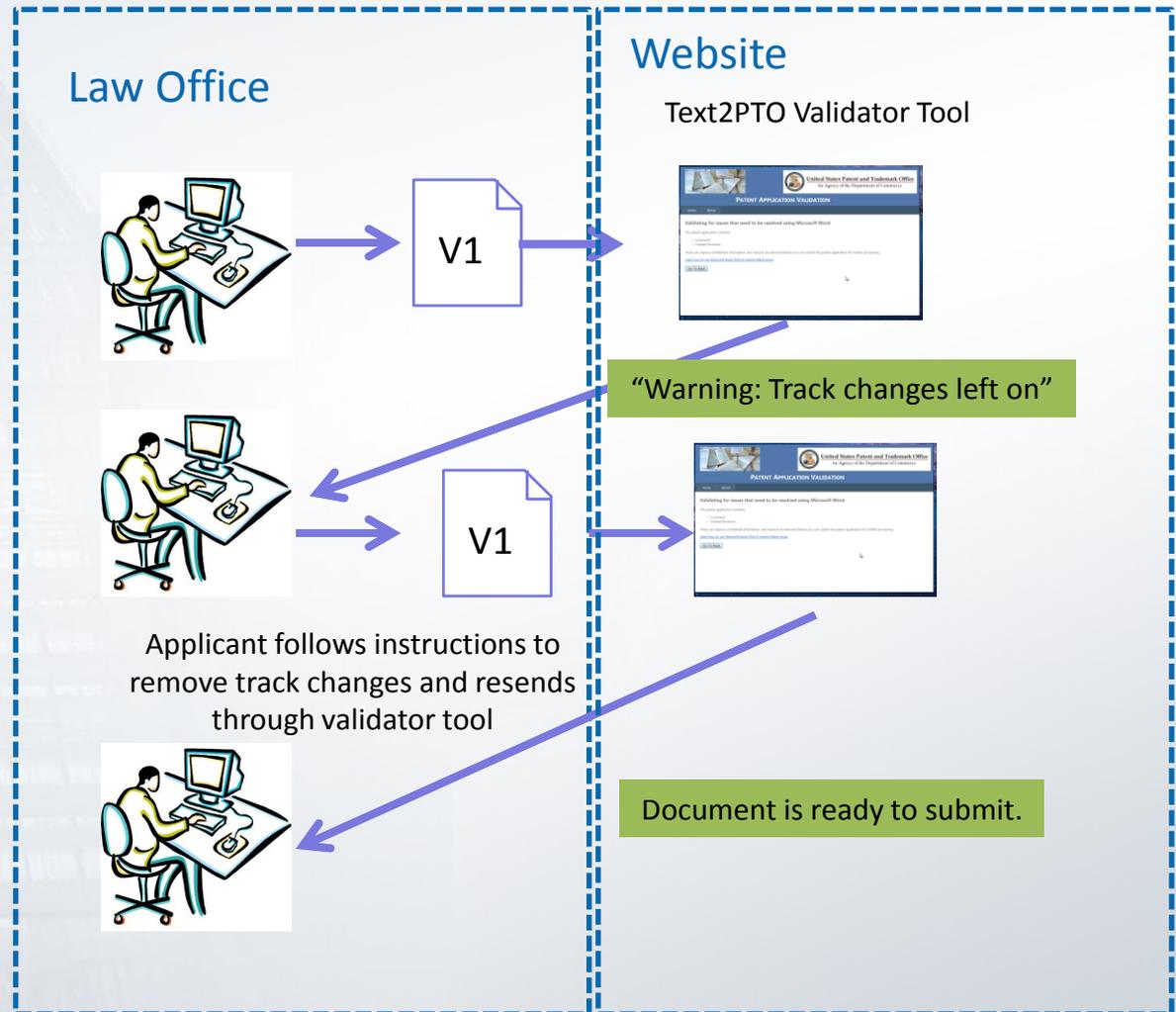
Check for Track Changes and Private Information



# How are Track Changes Managed

Run the validator wizard in a web browser on your own computer.

It tells you if you included private information or left on track changes and tells you how to remove it.





# VALIDATION WIZARD, PART 3

Check for Disallowed Markup (such as fonts, colored text) - Optionally Fix It.

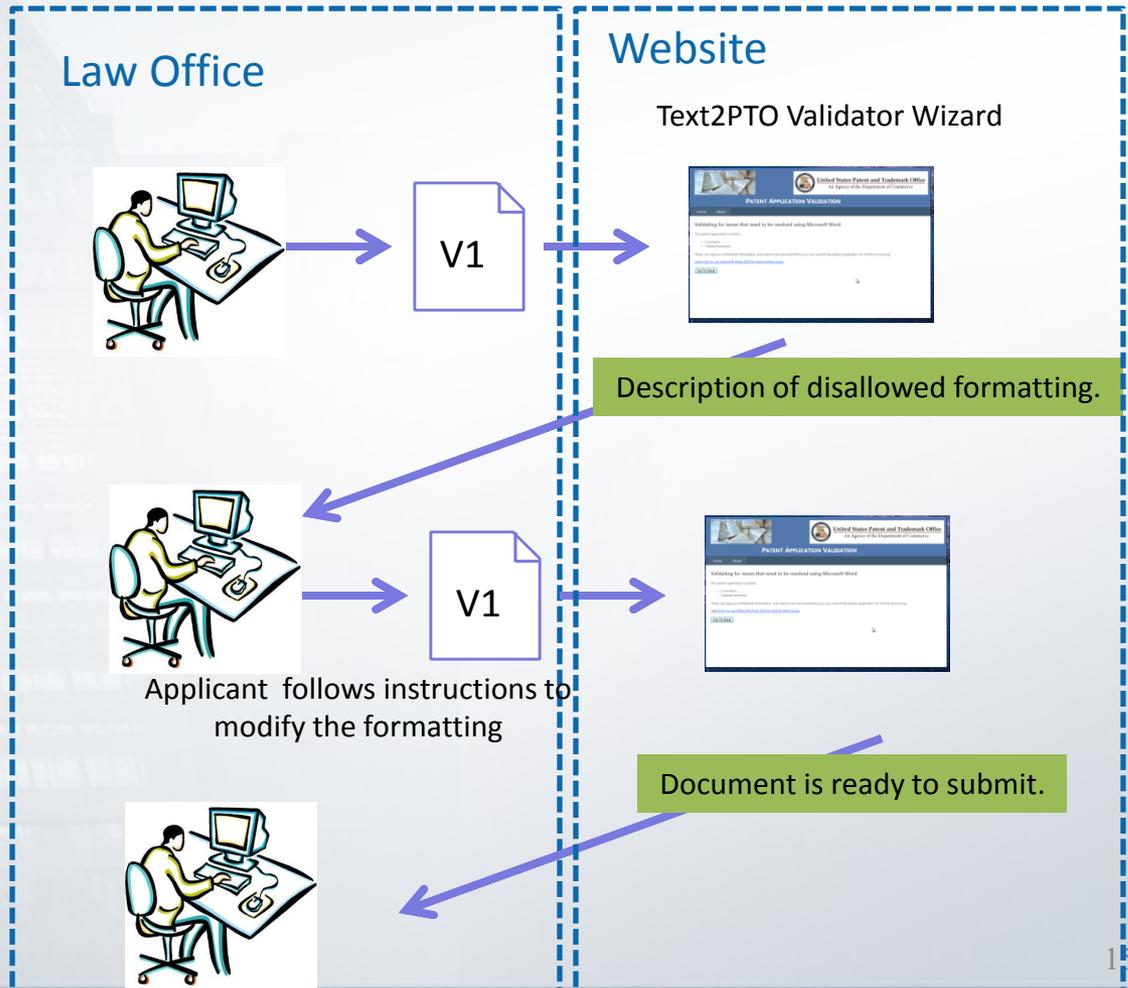


# Check for and change any disallowed formatting.

Run the validator wizard in a web browser on your own computer.

If your file has any disallowed formatting, either:

- Follow the instructions to remove it, or
- Let the tool remove it for you, step by step.





# **VALIDATION WIZARD, PART 4**

## **APPLICATION PARTS AND CONTENT**

Make sure the parts and contents of the application are properly identified.

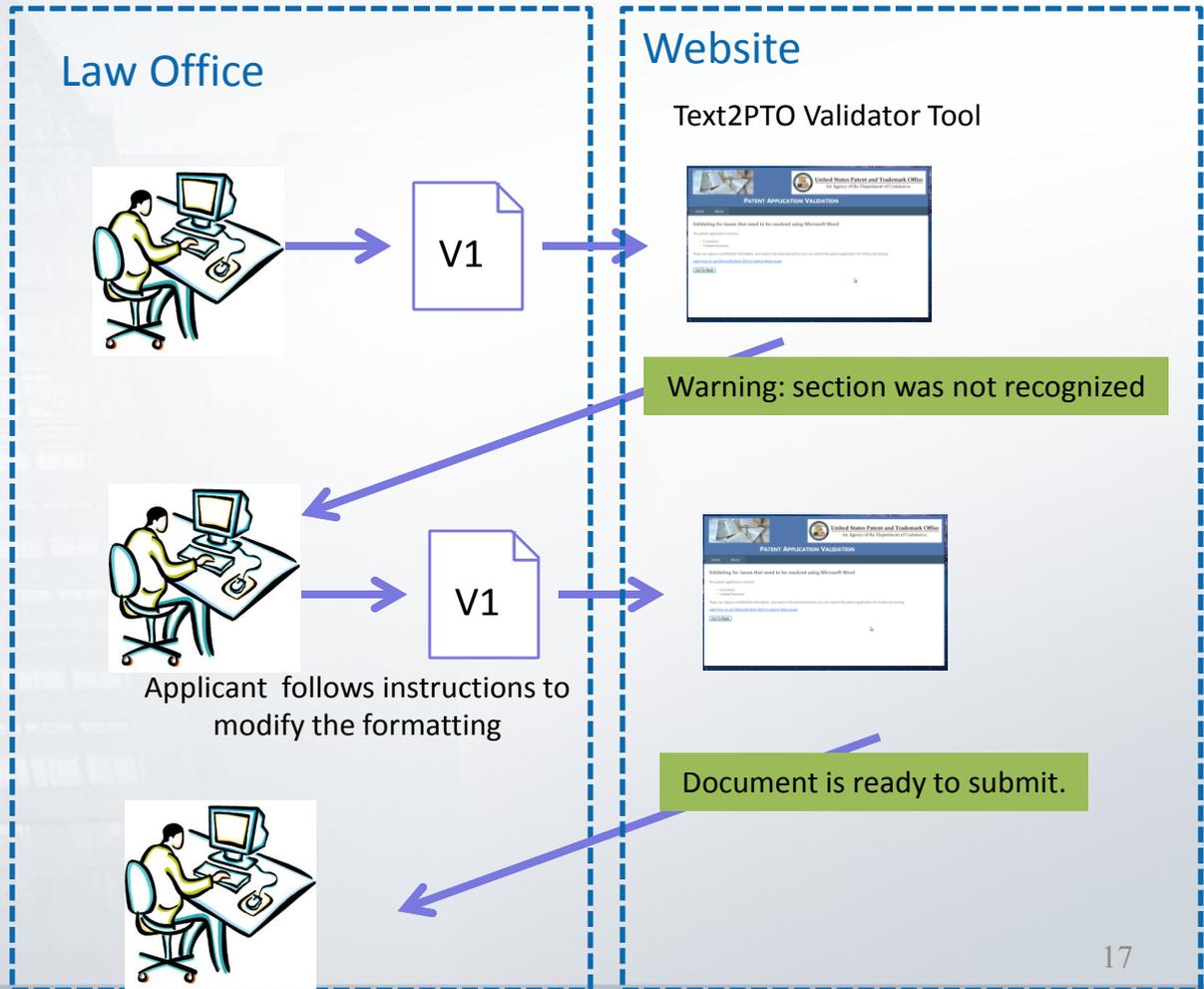


# Make sure sections headings are recognized.

Run the validator tool in a web browser on your own computer.

Verify the tool found the abstract, claims, and specification sections.

Make small adjustments if not.





# VALIDATION WIZARD, PART 5 CREATING A UNIQUE DOCUMENT ID

Text2PTO supplies an identifier is created based on the text itself.



# Ensuring the Document Remains Unchanged

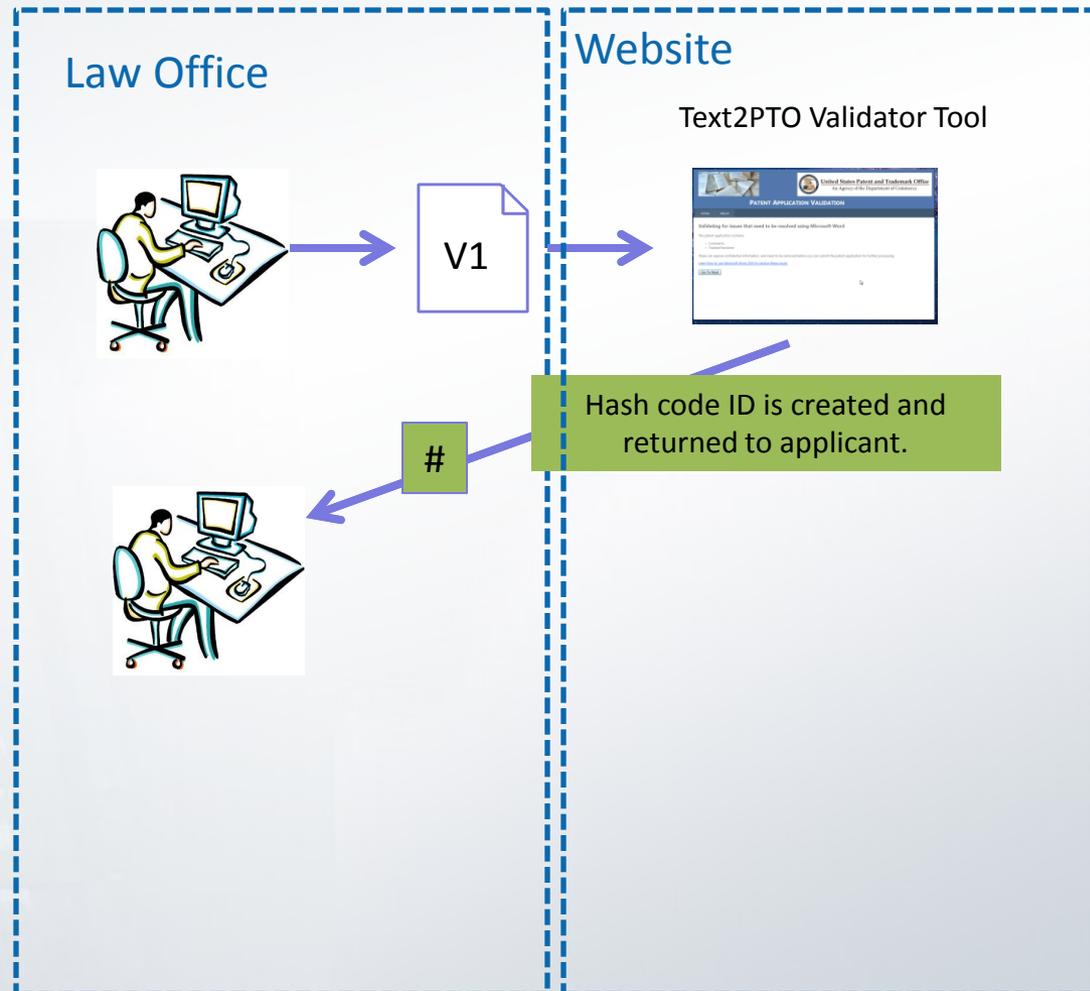
- A standard way to do this is to create a **unique identifier** that is based on the actual text of the file
  - This is called a “hash code”
- The validator tool will produce this unique ID for you
- If your document changes -- even by one space, the unique ID will change as well
  - This ID lets you **prove to yourself and others that the file content has not changed** during the filing or examination process
    - A new submission, a new identifier, as in the case of amendments



# Create a unique ID for this version of the document

Run the validation wizard in a web browser on your own computer.

The wizard generates a Hash Code ID and can place it on the document.

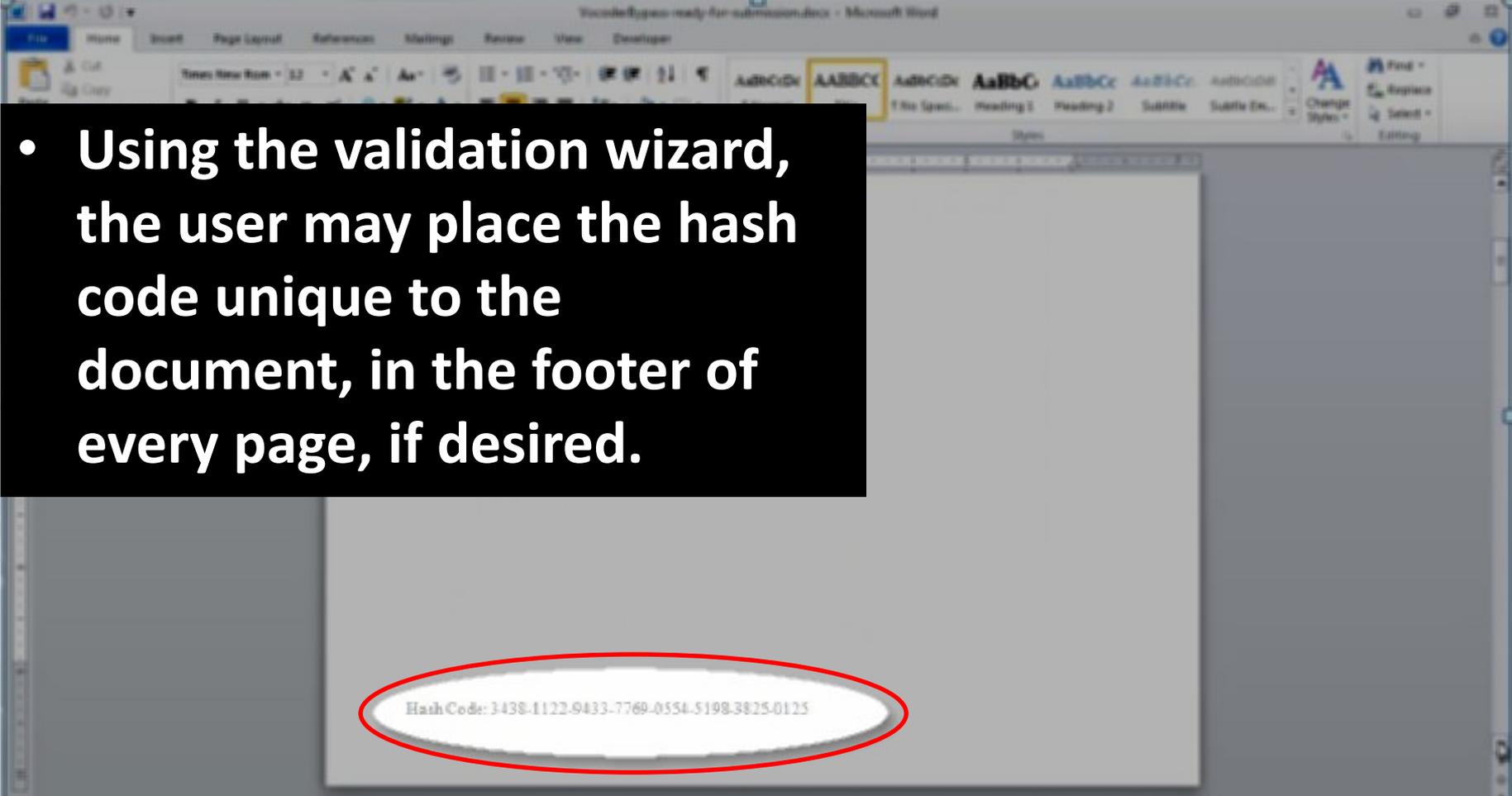


Hash Code: 3416-7573-1795-3555-8019-7024-6412-9001



# Document Fidelity

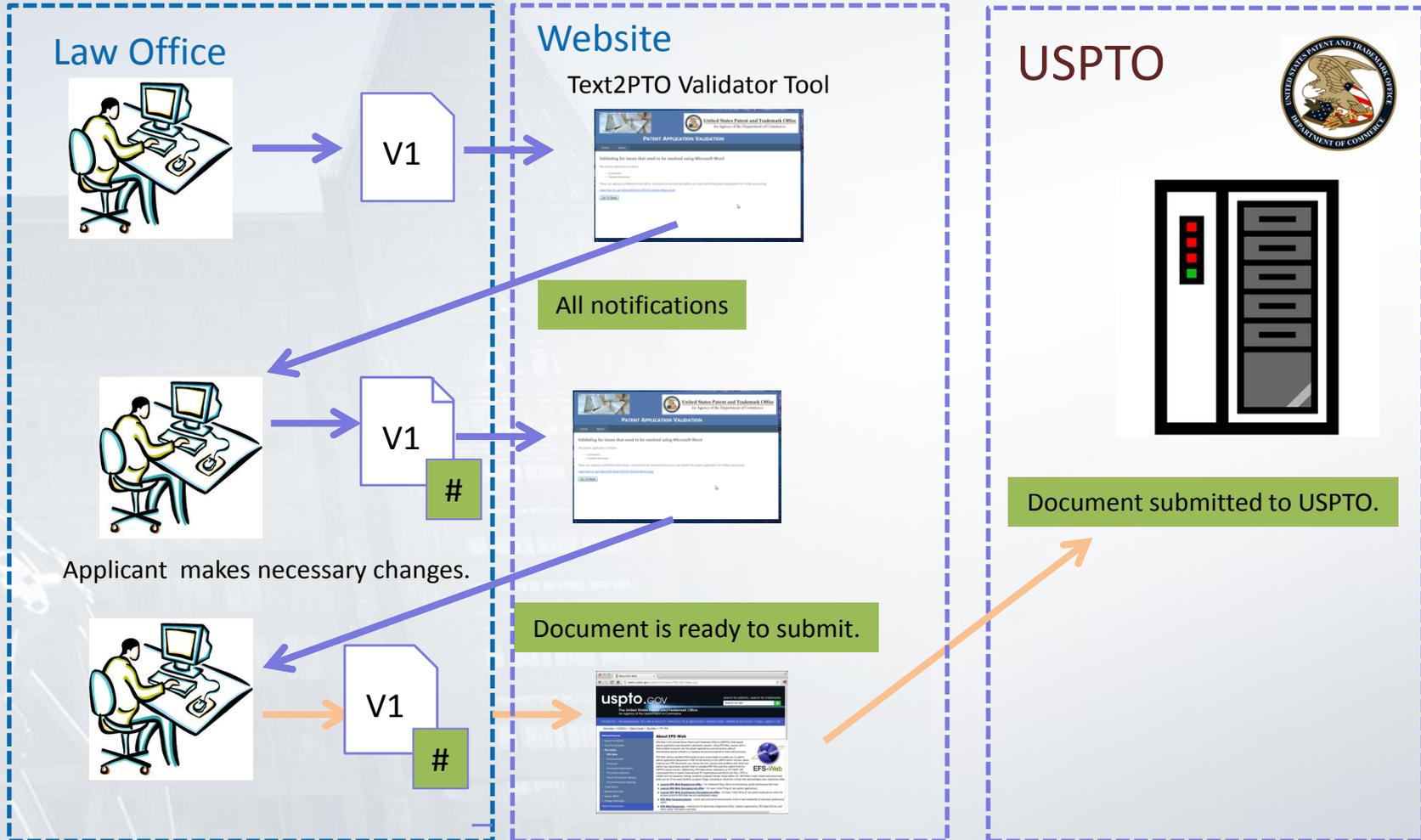
- Using the validation wizard, the user may place the hash code unique to the document, in the footer of every page, if desired.

A screenshot of a Microsoft Word document titled "YocohdeEggs-ready-for-submission.docx". The document is mostly blank, with a red oval highlighting the footer text: "Hash Code: 3438-1122-9433-7769-0554-5198-3825-0125". The ribbon at the top shows the "Home" tab with various font and paragraph options.

Hash Code: 3438-1122-9433-7769-0554-5198-3825-0125



# Proposed Process Overview





# VALIDATION WIZARD PART 6, AMENDMENTS

Modify a copy of your original document

Optional automated official markup.

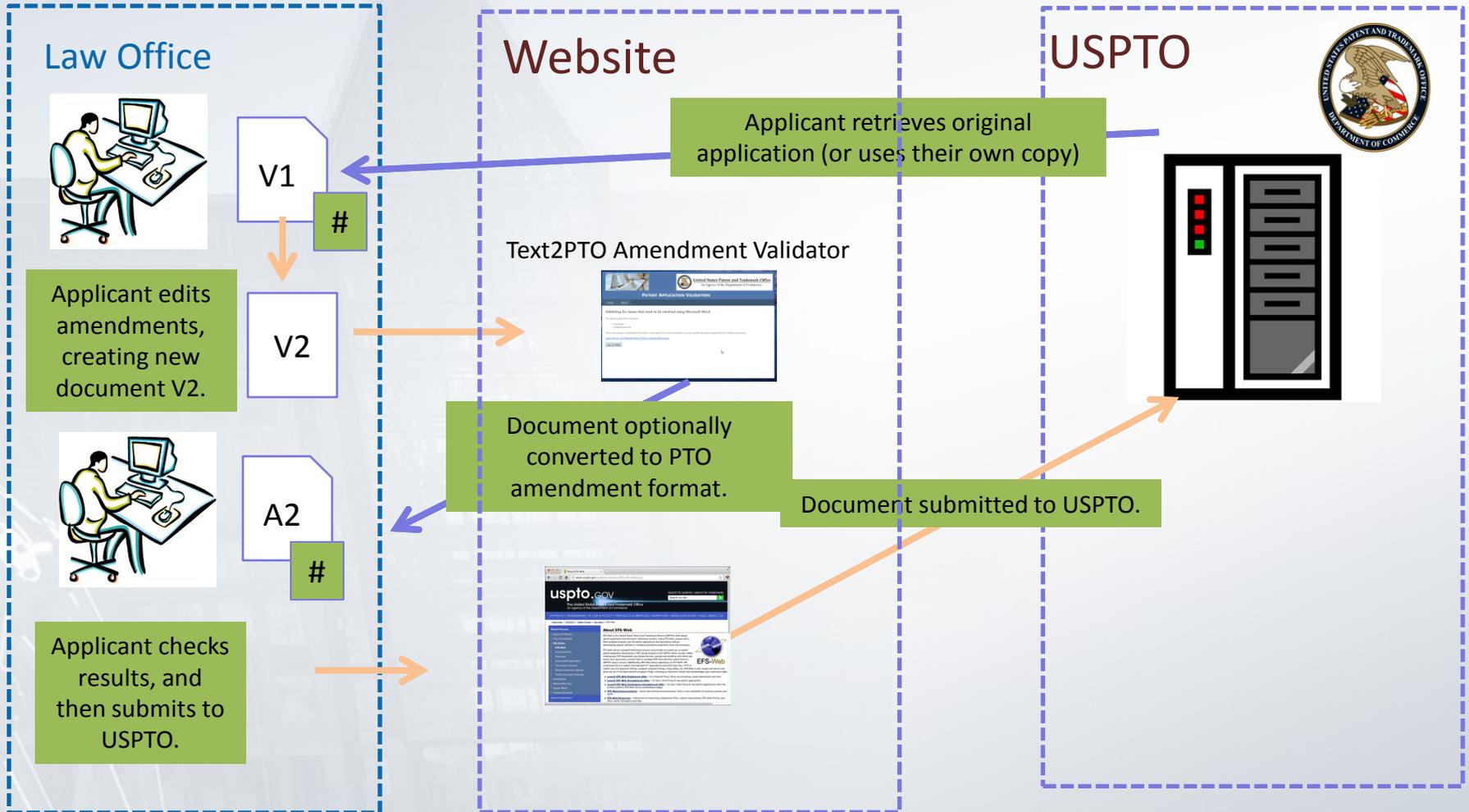


# Amendments

- Start with your submitted **MS Word file**
  - If you lost it, get a copy from the USPTO
- **Edit** it with track changes on
  - Delete and add material to the claims and specification without having to use markup format
- Run it through the **Amendment Validator**
  - (Optional) It will automatically **reformat** the edits you made into the **USPTO required mark up language**
  - (Optional) It will **generate an Amendment cover page**



# Edit copy of original file to create amendments.





# Making Amendments

- Using the Amendment Wizard allows the user to optionally have the wizard create the USPTO markup.

The image displays two side-by-side screenshots of Microsoft Word documents, illustrating the process of making amendments to patent claims. Both windows show the 'CLAIMS' section of a document titled 'VocoderBypass'.

**Left Window (Original Document):** The document is titled 'VocoderBypass - Copy.docx'. The 'CLAIMS' section contains several numbered claims. Claim 1 describes a method for transitioning a wireless communication system from vocoder active mode to vocoder bypass mode. Claim 2 describes transmitting a compressed speech signal during the bypass mode. Claim 4 describes the first signal containing final synchronization information. Claim 5 describes the vocoder bypass mode further comprising providing encoded speech information. Claim 6 describes the vocoder type information comprising a second signal within the compressed speech signal.

**Right Window (Amended Document):** The document is titled 'VocoderBypass-amendment-application-ready-to-submit.docx'. The 'CLAIMS' section shows the same claims as the original, but with amendments. Claim 1 is marked as '(Previously Presented)'. Claim 2 is marked as '(Previously Presented)'. Claim 4 is marked as '(Amended)'. Claim 5 is marked as '(Previously Presented)'. Claim 6 is marked as '(Previously Presented)'. A new claim 7 is added, marked as '(New)'. The amendments are highlighted in blue.

The large white oval highlights the differences between the two versions, showing the addition of '(Previously Presented)' and '(Amended)' markers, and the addition of a new claim 7.



# **ADDED VALUE: FORMALITIES CHECKS & ANALYTICS REPORTING**



# Details Provided in Analytics Report

## Analytical Report

Abstract	Claims	Claims vs Spec
<ul style="list-style-type: none"><li><a href="#">Summary</a></li></ul>	<ul style="list-style-type: none"><li><a href="#">Summary</a></li><li><a href="#">Terms</a></li><li><a href="#">Phrases</a></li></ul>	<ul style="list-style-type: none"><li><a href="#">Phrases In Claims not in Spec</a></li><li><a href="#">Terms In Claim not in Spec</a></li></ul>

### Abstract Summary

Number of words: 160.  
Number of paragraphs: 1.  
Abstract section exceeds max word limit: 150.  
Abstract section contains the following legal terms: means

---

### Claims Summary

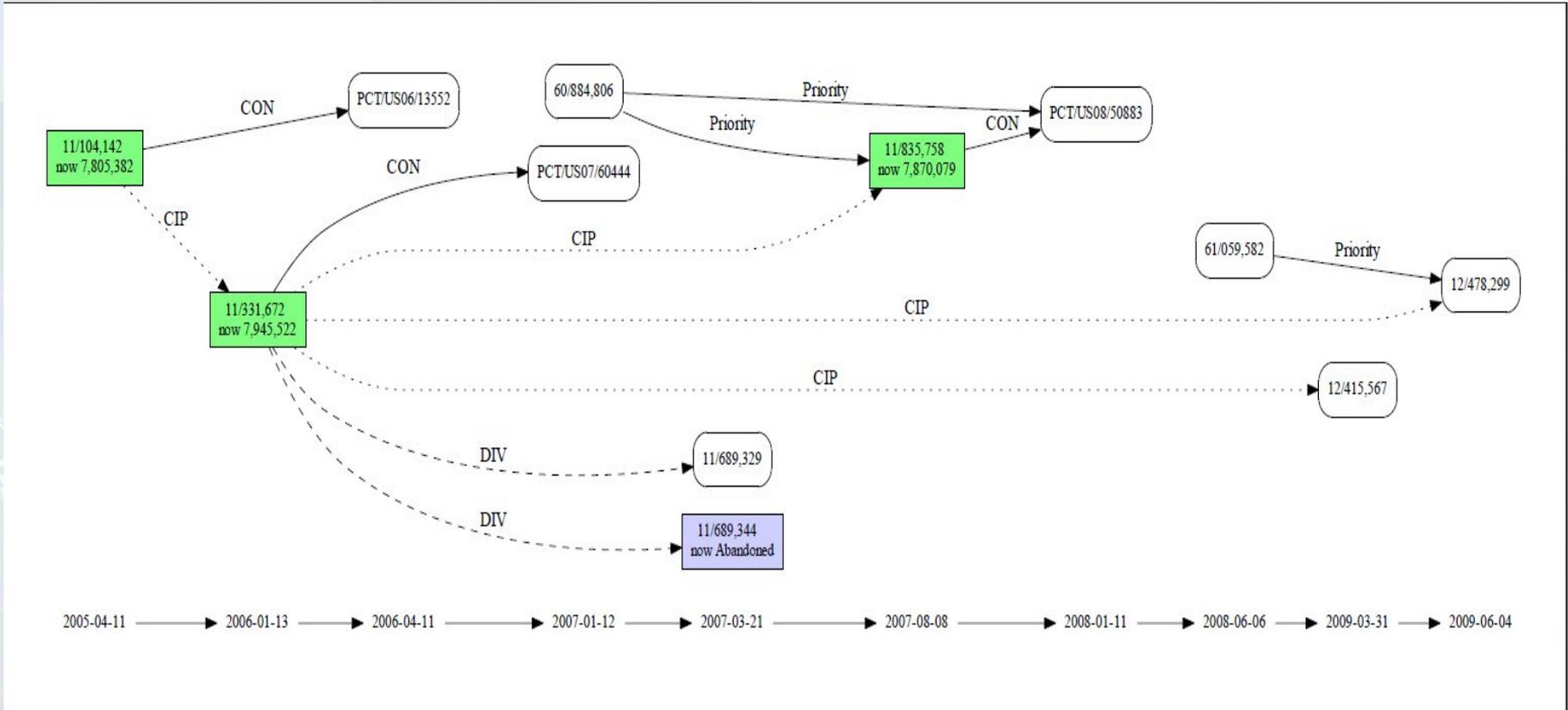
Total Claims: 19  
Independent Claims: 2  
Dependent Claims: 17  
Multiple Claims: 0  
Deleted/Cancelled Claims: 0  
Withdrawn Claims: 0

← Reviews for Compliance with MPEP rules



# Analytics Reporting

## Patent Family Map Showing Continuity





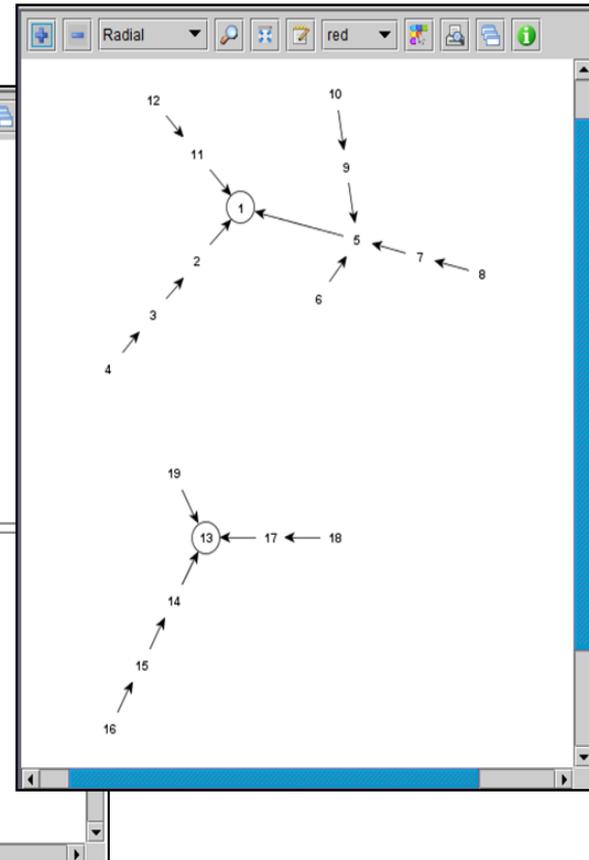
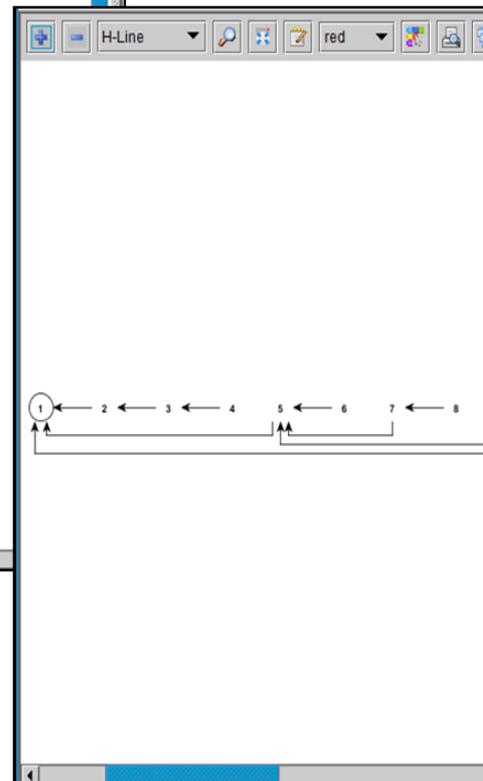
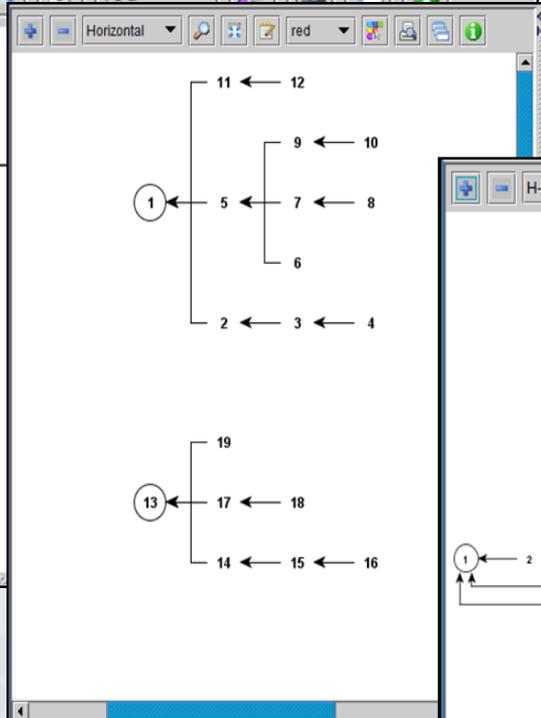
# Results of Formalities Checks (con't)

## Claim tree layout options

Text Viewer: 12/273578 - OPTICAL MODULE FOR AN ASSISTANCE SYSTEM

Vertical

- Vertical
- Direct
- Horizontal
- Branched
- Radial
- Radial 2
- balloon
- H-Line





# ADDED VALUE: PARAGRAPH NUMBERING

Automatically added paragraph numbers; keeps track of version numbers



# Paragraph Numbering

- The validator tool can automatically **number** the **paragraphs**
- Additionally, these numbers can be augmented with the **version number** of the document.
  - Application version 1
  - Amendment version 3
- This allows for **easier communication** between the applicant and the examiner about changed material.



# Paragraph and Version Numbers

VocoderBypass-38.docx - Microsoft Word

File Home Insert Page Layout References Mailings Review View Developer

## INVENTION DESCRIPTION

### METHOD AND APPARATUS FOR OUTBAND SIGNALING CONTROL OF IOCODER BYPASS

Field of the Invention

[V1-0001] The present invention relates generally to digital communication systems including a vocoder, and more particularly, to a method and apparatus for inband signaling control of vocoder bypass operation using 4 channels.

Background of the Invention

[V1-0002] Digital communication systems, and particularly, digital cellular and personal communication system (PCS) systems, include vocoding. Vocoding is the operation of digitally coding speech for transmission.

[V1-0003] For example, in digital cellular applications both the mobile, i.e., the cellular telephone, and the cellular infrastructure, i.e., the ground based equipment providing service to the mobile, each include a vocoder. In a typical cellular system, the vocoding permits substantial compression of the speech information to be transmitted and is particularly useful for increasing capacity of the cellular system.

[V1-0004] In a mobile-to-mobile call, there is double stage speech encoding/decoding (or "tandem vocoding") unless some scheme is provided to bypass vocoder operation in the cellular infrastructure. This is explained as follows.

[V1-0005] In the mobile-to-mobile call, the mobile transmitting on the uplink uses its vocoder to encode the uplink speech. The cellular infrastructure automatically decodes the uplink speech, which is necessary if the speech is to be transmitted to a land line telephone (i.e., to the public switched telephone network), to an analog portion of the cellular communication system, or to a similar non-digital portion of the communication

Page: 1 of 6 Words: 889 English (U.S.) 90%

VocoderBypass-38 - Copy.docx - Microsoft Word

File Home Insert Page Layout References Mailings Review View Developer

## INVENTION DESCRIPTION

### METHOD AND APPARATUS FOR OUTBAND SIGNALING CONTROL OF IOCODER BYPASS

Field of the Invention

[V2-0001] The present invention relates generally to digital communication systems including a vocoder, and more particularly, to a method and apparatus for inband outband signaling control of vocoder bypass operation using [[4]]~~6~~ channels.

Background of the Invention

[V2-0002] Digital communication systems, and particularly, digital cellular and personal communication system (PCS) systems, include vocoding. Vocoding is the operation of digitally coding speech for transmission.

[V2-0003] For example, in digital cellular applications both the mobile, i.e., the cellular telephone, and the cellular infrastructure, i.e., the ground based equipment providing service to the mobile, each include a vocoder. In a typical cellular system, the vocoding permits substantial compression of the speech information to be transmitted and is particularly useful for increasing capacity of the cellular system.

[V2-0004] In a mobile-to-mobile call, there is double stage speech encoding/decoding (or "tandem vocoding") unless some scheme is provided to bypass vocoder operation in the cellular infrastructure. This is explained as follows.

[V2-0005] In the mobile-to-mobile call, the mobile transmitting on the uplink uses its vocoder to encode the uplink speech. The cellular infrastructure automatically decodes the uplink speech, which is necessary if the speech is to be transmitted to a land line telephone (i.e., to the public switched telephone network), to an analog portion of the cellular communication system, or to a similar non-digital portion of the communication

Page: 1 of 6 Words: 890 English (U.S.) 90%



# Benefits: Filing Applications as Text

- Better for applicants:
  - No scanning
  - Re-use the text for amendments
  - Some formalities checks
  - Analytic Reporting
- Better for USPTO:
  - Cost savings
  - Higher accuracy
  - Enables new tools for patent examiners



# Thank you for your time

**WE WELCOME YOUR FEEDBACK!**

**IF YOU HAVE QUESTIONS REGARDING THESE PROPOSED  
PROCESSES, OR SUGGESTIONS FOR ENHANCEMENTS —**

**PLEASE, SEND AN E-MAIL TO:**

**[EFILINGMODERNIZATION@USPTO.GOV](mailto:EFILINGMODERNIZATION@USPTO.GOV)**



# TECHNICAL DETAILS



# Some Technical Details

- The new patent examination tools make use of XML to represent documents in the system
- Modern versions of word processing tools like MS Word (2007 and later) store documents in OpenXML, an open format
- USPTO can transform OpenXML documents into the format needed by the new tools



# More Technical Details

- MS Word allows certain kinds of markup that the USPTO does not want contained in the XML
- The Validator wizard checks for this kind of markup and warns you
  - You can remove the markup yourself,
  - Or let the Validator remove it for you



# A Fragment of OpenXML

```
<w:body>
  <w:p w:rsidR="00407A0E"
    w:rsidRDefault="009519F9">
    <w:r>
      <w:t>Hello, World</w:t>
    </w:r>
    <w:bookmarkStart w:id="0"
      w:name="_GoBack"/>
    <w:bookmarkEnd w:id="0"/>
  </w:p>
  <w:sectPr w:rsidR="00407A0E">
    <w:pgSz w:w="12240"
      w:h="15840"/>
  </w:sectPr>
</w:body>
```



# Some Transformation Code

855 Program

```
static object TransformToSimpleXml(XNode node, string defaultParagraphStyleId)
{
    XElement element = node as XElement;
    if (element != null)
    {
        if (element.Name == W.document)
            return new XElement("document",
                element.Element(W.body).Elements()
                    .Select(e => TransformToSimpleXml(e, defaultParagraphStyleId)));
        if (element.Name == W.p)
        {
            string styleId = (string)element.Elements(W.pPr)
                .Elements(W.pStyle).Attributes(W.val).FirstOrDefault();
            if (styleId == null)
                styleId = defaultParagraphStyleId;
            return new XElement("p",
                new XAttribute("style", styleId),
                element.LogicalChildrenContent(W.r).Elements(W.t).Select(t => (string)t)
                    .StringConcatenate());
        }
        if (element.Name == W.sdt)
            return new XElement("contentControl",
                new XAttribute("tag", (string)element.Elements(W.sdtPr)
                    .Elements(W.tag).Attributes(W.val).FirstOrDefault()),
                element.Elements(W.sdtContent).Elements()
                    .Select(e => TransformToSimpleXml(e, defaultParagraphStyleId)));
        return null;
    }
    return node;
}
```



# More Technical Details: Hash Codes as IDs

- It is standard practice to create a document “signature” from a hash function.