

NEWS ANALYSIS

ChatGPT Bot Is About to Change The White-Collar World

by Martin A. Sullivan

*There once was a chatbot so great
It could write an article in just one short date
A lazy person said
“I’d rather be in bed”
The chatbot replied “Leave it to me, I’ll make it
first rate!”*

— ChatGPT

Applications of artificial intelligence have been around for years, even though most non-tech folks don’t realize it. But AI has just gone prime time, and its use in white-collar jobs could soon be as common as that of search engines and spreadsheets. On November 30, 2022, the research consortium OpenAI began allowing anyone free access to its game-changing, user-friendly version of AI technology called ChatGPT.

The text-in, text-out chat interface works for all types of writing in response to all types of requests. In some ways it does what the pocket calculator did for mathematics: If your task isn’t too complicated, it provides the answer. And for the more complicated tasks, it gets you to the finish line a lot more quickly. This now — and more so in the future as the technology undoubtedly improves — has big implications for all types of researchers and writers, including tax professionals. But be careful: Unlike a pocket calculator, ChatGPT responses can contain errors — especially when a correct answer requires judgment or extensive specialized knowledge.

You Gotta Try This

After 15 minutes of playing with it, here’s your author’s first impression: It’s like a conversation with a plain-spoken individual who has memorized everything on Wikipedia. After you ask it a question in conversational English on almost any topic, the program offers an original, coherent response *in seconds*. The quality of the response is about what you might find in a B-grade essay from a college freshman. Don’t like that response? Request as many iterations as you desire. (The online version requires written

queries, and it supplies responses in text. There are phone apps that allow spoken questions and provide audio responses.)

ChatGPT does more than write paragraphs. For techies: It will write computer code in minutes that otherwise might take hours. For the researcher: It can spew out, with citations, a balanced explanation of almost anything — from auto repair to zoology. For teachers, it can create a semester full of test questions and answers in minutes.

And for everybody else, it can just be a lot of fun. Request: “In the style of Edward Lear, write a poem about Elmer Fudd advising the Fed about inflation.” (The response was funny and the content substantively defensible.) Unlike other AI technologies that may receive visual queries or produce images (DALL-E, an OpenAI deep-learning model, generates original images from textual input) or that work with large numerical data sets, ChatGPT focuses on text in and text out. And by the way: That text can be in any foreign language.

What about tax stuff? With information it has culled mostly from the web — but only through 2021 — ChatGPT can quickly provide useful and



Lawyer happily writing about tax regs in comic book style. Original image generated by Dall-E-2 (sibling technology to ChatGPT) from OpenAI.

readable information about tax policy and tax practice. But fear not! Although it can be extremely useful to novices on tax topics, it doesn't (yet) provide answers to the questions that tax professionals get paid to answer.

But that doesn't mean tax professionals won't find it useful. Even the high priests and priestesses of the profession aren't experts in every aspect of tax law. So ChatGPT can acquaint users with previously unknown facts or reacquaint them with subject matter learned long ago. For students, it can serve as a tutor in any area of tax law, history, economics, and policy. Right now, it can help practitioners with simple writing tasks, like drafting client newsletters, and simple research, like providing an overview of a specific tax credit. For tax academics and journalists, it can provide a good first draft (or perhaps even a final draft) of paragraphs that provide background to readers.

Certainly, the conversational style of the interaction is a primary attraction of ChatGPT. But even more alluring is how easy it is to engage in a *dialogue* with the machine. You don't start afresh with your learning with each request; a series of requests are automatically interrelated and build on each other. So you can move the dialogue along with terse requests (typos allowed) like "explain that in plain English" or "elaborate on that second paragraph" or "provide some examples." Another time-saving feature is to ask for the response to include citations, for which it typically provides web links. And it can generate them in accordance with a specified style (for example, MLA). A good way to get a balanced overview on a topic is to simply ask for it. For example, you could ask the program to "provide pros and cons of territorial taxation."

An Example

The easiest way to learn about ChatGPT's strengths and weaknesses is to simply play with it. There is a brief registration process on the OpenAI website, and after about two non-frustrating minutes you can start chatting with the program.

To give you a feel for the experience, here is how we started a chat session: "Please explain in detail how GILTI operates in the style of the King



U.S. Capitol with dollar bills in the sky in the style of Cézanne. Original image generated by Dall-E-2 (sibling technology to ChatGPT) from OpenAI.

James Bible." Here is the near-instantaneous response from ChatGPT:

And it came to pass that the GILTI, or Global Intangible Low-Taxed Income, was created by the powers that be in order to address the issue of corporations shifting their profits to low-tax jurisdictions.

And the GILTI did require that all corporations with foreign operations must pay a minimum tax on their intangible income, such as patents and trademarks.

But the GILTI did not apply to all foreign profits, for it excluded certain types of income and allowed for credits against the tax for certain taxes paid to foreign governments.

And it was said that the GILTI would serve as a deterrent for corporations seeking to avoid paying their fair share of taxes and would help to level the playing field for domestic businesses.

But some did criticize the GILTI, saying it was too complex and burdensome for small businesses to comply with.

Despite the controversy, the GILTI remained in place, and it was up to the corporations to determine their GILTI liability and pay the appropriate taxes.

And so it was that the GILTI operated, causing some to rejoice and others to lament, but ultimately serving as a means of ensuring that corporations paid their fair share of taxes on their global income.

OK, let's rattle off some observations on this output. ChatGPT knows the acronym of a not-so-obscure international tax provision. Moreover, it has a general idea about how the provision operates. It provides a balanced view of the pros and cons from a policy perspective. And the tone of the response can be tailored by requesting it using the expression "in the style of." Of course, it is inadequate for a tax professional's needs. Regarding the substance of the response, the comment about GILTI being burdensome to small businesses, though technically correct, is largely irrelevant because not many small businesses are also multinational corporations with foreign subsidiaries. But remember that you can ask for repeat responses to the same question. Or you can modify your original question to guide ChatGPT to an answer more to your liking.

So now, let's see what we get in response to this request: "Provide a technical, businesslike explanation of GILTI to a CFO of a multinational corporation." ChatGPT's response:

GILTI, or Global Intangible Low-Taxed Income, is a provision in the U.S. tax code that aims to prevent multinational corporations from shifting profits to low-tax jurisdictions. It applies to foreign subsidiaries of U.S. companies that have a tax rate that is lower than a certain threshold (currently 10.5%).

Under GILTI, the U.S. parent company is required to pay tax on any GILTI income earned by its foreign subsidiaries. This income is calculated as the excess of the company's foreign subsidiaries' net income over a fixed return on the company's tangible assets.

The purpose of GILTI is to level the playing field for U.S. companies by

ensuring that they are not at a disadvantage compared to domestic companies that are subject to a higher tax rate. It also helps to prevent companies from engaging in tax avoidance tactics, such as transferring intellectual property to low-tax jurisdictions in order to reduce their overall tax liability.

It is important to understand the implications of GILTI and how it may impact the company's overall tax strategy. This may involve identifying and mitigating any potential GILTI exposure, as well as considering the impact of GILTI on the company's operations and financial planning.

Far From Perfect

ChatGPT can provide outright wrong information. And it has two additional major drawbacks. First, although the quality of the results is sufficient for topics that you might see in a high school essay, the results cannot get past generalities for complicated tax issues (especially those concerning tax practice).

Second, this latest version of ChatGPT does not have current information; it hasn't learned anything that happened after 2021. If we had asked about the corporate alternative minimum tax in the Inflation Reduction Act, it would have simply admitted that it doesn't know. So, importantly, ChatGPT cannot be used to provide news.

Capabilities and the Future

For insight into how this technology might overcome, at least partially, its aforementioned shortcomings, it's useful to have a rudimentary idea of the mechanics that make it work. A nontechnical and oversimplified explanation begins by dividing the technology into two parts: (1) an enormous amount of digitized text, and (2) various complex computer programs that "train" this data.

The digitized text is a gazillion kilobytes of text gleaned from a decade of substantive internet web pages as they existed through 2021, books published before 2022, and a bunch of other publicly available sources of big data. So while

ChatGPT has a massive amount of material from the internet, it is from an internet frozen in time: It is not connected to the internet in real time. If OpenAI can get the vintage of the data closer in time to the release date, it will make ChatGPT more “newsy” and therefore more cutting-edge.

One clumsy way to get ChatGPT to write about recent content is to enter the text of a recent news article and make a request. For example, you could enter into the chat field:

Summarize the following text: [Paste your selected text].

When we tried this approach with a recent 4,000-word *New York Times* article on Rep.-elect Elise M. Stefanik, R-N.Y., ChatGPT said it was too long. But a request for a summary of a 2,000-word article from *The Washington Post* on Rep.-elect George Santos, R-N.Y., returned a decent summary. We also got a useful response by requesting summaries of editorials about the chaos in Congress appearing in the January 5 editions of *The Wall Street Journal* and *The Washington Post* as well as an explanation of the differences between the two.

Source Data and Training Programs

The other important thing to keep in mind about the source data fed to ChatGPT is that it is almost entirely public as opposed to proprietary. But new data sources can be integrated with the massive “core” ChatGPT data to create more relevant and valuable responses for users seeking in-depth knowledge and analysis. Businesses that have accumulated exclusive data or publishers that have amassed specialized technical information might want to add those assets to ChatGPT’s data set.

The second major component of ChatGPT is the suite of training programs that organize the source data through categories and relationships. Some of those programs are fully or nearly automated. For example, a program using input data can train itself to predict the next word in a sentence: If it receives the word “home,” it might expect the next word to be “run” only 1 percent of the time, but if it is preceded by text with a whole bunch of baseball terms, that probability might increase to 80 percent. Another program might identify grammatical rules related to a specific

word. For example, the program might recognize that the word “phone” is most often a noun but that it could be a verb, especially if there is another verb in the sentence. The program then assigns a probability regarding how the word “phone” should be used in any output it produces.

Some of the training programs have more human input, especially when subjectivity is required. So some words may be associated with a positive attitude or happiness. Human reviewers categorize those words, enabling the program to use them in responses that require an upbeat tone or responses geared toward children, for example. Also, human reviewers may rate responses for qualities like accuracy or fluency, training the computer to avoid similar responses and thus lower ratings.

What does all this tell us about improving ChatGPT generally and in relation to tax? More detailed text on tax matters from the public domain and from users can be integrated into ChatGPT’s training process, improving the quality and depth of responses.

Regarding the data-training programs, more input from human tax experts should improve the quality of responses in specific areas of tax law. If the program is generating summaries of Tax Court cases or IRS guidance, for example, they could be evaluated by human annotators to see how well they capture the key points.

Poetry on Demand

Request to ChatGPT: “Write a poem explaining the pros and cons of using ChatGPT currently in tax practice and how that might change in the future.”¹ ChatGPT’s response:

In the tax world, ChatGTP is a sight
A tool to help us through the day and
night
But like all things, it comes with pros and
cons
Some find it helpful, others not so much
On the plus side, ChatGTP is quick and

¹Please note that the text of the article was edited to make the spelling of ChatGPT uniform, while the text of the bot’s response was left as is. The bot’s error was because of the author’s own misspelled term in the request, but one could wonder how close we truly are to being able to rely on these tools if this one cannot even recognize when its own name is misspelled.

easy

A fast way to ask questions, get answers and for free

But there's a downside, as some will attest ChatGPT can't answer every question, at its best

And what about the future? Will ChatGPT reign supreme?

Or will it fade away, a passing dream?

Only time will tell, but one thing's for sure Technology will continue to evolve, that's for sure

So, in conclusion, ChatGTP has its place A helpful tool, but not always the case Human interaction still has its value and worth

So, let's use ChatGTP, but not forget our own mirth.

ChatGPT-Generated Article About ChatGPT's Use in Tax Practice

Note: Entering only two substantive English language prompts into the text box at chat.openai.com — and, yes, you will want to remember that address — the following original article was generated free of charge in less than one minute by the ChatGPT software. The prompts used to generate the text and the minor edits to the generated text are listed at the end of the article.

Introducing ChatGPT and Its Potential Benefits in Tax Practice

Artificial intelligence is quickly becoming a ubiquitous presence in a variety of industries, and the legal profession is no exception. From automating routine tasks to providing real-time assistance during client meetings, AI technologies have the potential to revolutionize the way lawyers work and serve their clients. One of the most recent and notable developments in the field of AI is ChatGPT, a natural language processing system that has garnered significant attention and interest.

In this article, we will provide a primer on ChatGPT and its role in the field of AI. We will then explore the potential benefits of ChatGPT for tax lawyers and discuss some of the ways it could be utilized in tax law practices. Finally, we will touch on some of the challenges and limitations of ChatGPT and the importance of responsible deployment of AI in the legal profession.

Understanding ChatGPT

So, what exactly is ChatGPT? Simply put, it is a state-of-the-art natural language processing system that can generate human-like text based on a given prompt. Developed by OpenAI, ChatGPT is trained on a massive dataset of human-generated text and uses machine learning algorithms to generate coherent and plausible responses to a wide range of prompts.

But how does ChatGPT differ from other AI technologies and natural language processing systems? One key distinction is its ability to generate long-form text, such as entire articles or even entire books. Other systems may be able to

generate shorter responses or perform specific tasks, but ChatGPT's ability to generate extended text sets it apart. Additionally, ChatGPT's training on a diverse dataset of human language enables it to have a wide range of knowledge and the ability to generate responses to a wide range of prompts.

Benefits of ChatGPT for Tax Lawyers

Now that we have a better understanding of what ChatGPT is, let's turn to the potential benefits it could have for tax lawyers. One of the most obvious benefits is the potential for increased efficiency and productivity through automation of tasks. For example, ChatGPT could be used to quickly generate drafts of legal documents or correspondence, freeing up lawyers to focus on more high-level tasks that require their expertise.

Another potential benefit is improved accuracy and consistency in analysis and research. Because ChatGPT is trained on a large dataset of human-generated text, it is able to draw on this knowledge to provide accurate and reliable information on a wide range of topics. This could be particularly useful for tax lawyers who need to stay up to date on changes in tax laws and regulations and need a reliable source of information.

It's also important to note that ChatGPT is not designed to replace human expertise, but rather to augment it. While it can perform certain tasks faster and more accurately than humans, it is not able to replicate the judgment and strategic thinking that are critical to the practice of law. Therefore, ChatGPT could be used as a valuable tool to help tax lawyers do their jobs more effectively, rather than replacing them altogether.

So, how might tax lawyers be able to utilize ChatGPT in their practices? Here are a few potential applications:

- **Assisting with tax code research and interpretation:** ChatGPT could be used to quickly generate summaries of relevant tax laws and regulations or provide interpretations of specific provisions. This could save lawyers significant amounts of time that would otherwise be spent poring over lengthy and complex codes.
- **Generating drafts of legal documents and correspondence:** As mentioned earlier,

ChatGPT could be used to generate drafts of legal documents such as contracts, pleadings, and other legal forms. This could save lawyers time and allow them to focus on reviewing and fine-tuning the drafts rather than starting from scratch.

- **Providing real-time assistance during client meetings and negotiations:** ChatGPT could be used to provide quick answers to questions or provide relevant information during client meetings or negotiations. This could help lawyers stay on top of their cases and provide better service to their clients.

Challenges and Limitations of ChatGPT

Of course, it's important to recognize that ChatGPT is not a panacea for all of the challenges facing tax lawyers. There are several challenges and limitations to consider when using ChatGPT or any other AI technology:

- **Ethical considerations:** As with any AI deployment, it's important to consider the ethical implications of using ChatGPT in tax law practices. This includes issues such as transparency, accountability, and potential biases in the data and algorithms. Lawyers must be mindful of these issues and take steps to ensure that ChatGPT is used ethically and responsibly.
- **Dependence on quality and completeness of data:** The accuracy and usefulness of ChatGPT's responses depend on the quality and completeness of the data it has been trained on. If the data is incomplete or biased, ChatGPT's responses may be flawed as well. It's important for lawyers to be aware of this limitation and to verify the accuracy of ChatGPT's responses before relying on them.
- **Potential biases in the training data and algorithms:** AI systems like ChatGPT are only as unbiased as the data and algorithms they are trained on. If the data used to train ChatGPT is biased in some way, the system may perpetuate these biases in its responses. It's important for lawyers to be aware of this potential issue and to take steps to mitigate any biases that may be present in ChatGPT's responses.

Conclusion

To sum up, ChatGPT is a promising new development in the field of AI that has the potential to benefit tax lawyers in a variety of ways. From increased efficiency and productivity to improved accuracy and consistency, ChatGPT could be a valuable tool for tax lawyers looking to streamline their practices and serve their clients more effectively. However, it's important for lawyers to be aware of the challenges and limitations of ChatGPT and to use it responsibly and ethically. As AI continues to develop and evolve, it's important for tax lawyers to stay informed and up to date on the latest developments and consider how they can be used to benefit their practices.

Notes (Not Computer Generated)

To begin using ChatGPT you must register at chat.openai.com by providing your email address and phone number, creating an eight-character password, and proving that you are not a robot. You are then ready to go. If you get an error message after making a request (usually because there is excessive traffic on the website), opening a new window and logging in again will usually get you back in action.

For trivial stylistic reasons, we modified the suggested title, removed Roman numerals from subtitles, and deleted the parenthetical "(AI)" in the original first sentence.

The first prompt was: "Please provide an outline and title for a 2,000-word article explaining AI to tax lawyers with no computer expertise, explaining why ChatGPT is an important new development, and explaining how tax lawyers might utilize ChatGPT in their practices."

The second prompt was: "Please provide text of article based on this outline." That outline is not reproduced here.

A third prompt was added when, about halfway through the generation of the response, the generated output stopped, as if the computer had run out of gas. But it quickly got back on track after it received the prompt: "Please continue the response."

Note well that if after any generated response you are dissatisfied, or you are just curious about

alternatives, you can ask for different responses. (So if you enter the exact same prompts used here, you will get a different version of the computer-generated article.) Or, even better, you can fine-tune your request — for example, by narrowing the scope of your inquiry. Another entertaining option is to request a change in style (for example, ask for the response to be "in the style of Ernest Hemingway" or "written so a 10-year-old can understand"). ■