Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Amerifactors Financial Group, LLC, Petition for Expedited Declaratory Ruling	
Junk Fax Prevention Act of 2005	CG Docket No. 05-338
Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991	CG Docket No. 02-278

Reply Comments of Robert Biggerstaff

Robert Biggerstaff submits these reply comments on the Petition of Amerifactors Financial Group, LLC.[1] The *Petition* is based on a inaccurate description of fax technology and should be denied.

I received my BS in Engineering in 1987 and have over 30 years of experience in computer systems, communications, and computer telephony. I have over two decades of direct experience with all facets of facsimile technology, including computer-based facsimile systems and fax servers, as well as technical specifications and details of facsimile transmissions. This includes both installation, evaluation, and testing of many different facsimile systems and fax servers, service and maintenance of such systems on a day to day basis, installation and configuration of such systems, as well as writing drivers and other software for facsimile-enabled software applications.

I have extensive knowledge of how fax transmissions are processed, the standards involved, how the various types of devices that send and receive faxes operate, and how

[1] *Petition for Expedited Declaratory Ruling of Amerifactors Financial Group, LLC*, CG Docket Nos. 02-278 and 05-338 (filed July 13, 2017) (*Petition*).

various fax forwarding and delivery technologies function over both packet-switched and circuit-switched networks.

There is a substantive, and fatal, logical fallacy that the Petition is based on one that is unfortunately repeated by many commenters.[2] The Petition sets it out as follows:

> [The *Westfax Order*] defined [e-faxes] as "a document sent as a conventional fax then converted to and delivered to a consumer as an electronic mail attachment. This description implies that an ordinary fax transmission occurred, and that the user alters the transmission only after receipt of the fax. This may be true of some fax transmissions (though Amerifactors is not sure exactly what services may be covered), but it is not true of online fax services. Online fax services do not receive documents as "conventional faxes" and no telephone facsimile machine is involved. Instead, online fax services receive transmissions - from whatever type of device - as digital files over computer servers that process and manage multiple documents simultaneously. While the user may choose to print files if he or she wishes, this choice does not render the document a "conventional fax."[3]

In actuality, the Commission's Westfax Order is not flawed in its description of e-faxes, but is perfectly correct in this context. The Petition is particularly wrong when it asserts that "[o]nline fax services do not receive documents as 'conventional faxes' and no telephone facsimile machine is involved." The plain fact is that every fax transmission received and processed by a "fax server" is indeed "sent to" and "received by" a "telephone facsimile machine" as defined by the TCPA. In my entire career I have never found, or even heard of, a system that meets the description in the *Petition*.

Indeed, neither Petitioner nor any commenter has actually identified *any* such system in existence that is not a "telephone facsimile machine" as defined by the TCPA.

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[2] *See, e.g*. Comments of Cynthia Brinker ("Modern day online fax solutions are nothing more than internet based electronic message servers that take packets of TCP/IP data and move them on to their destination as either a message in an online web-portal or attachments via email.")

[3] Petition, p. 6 (emphasis added).

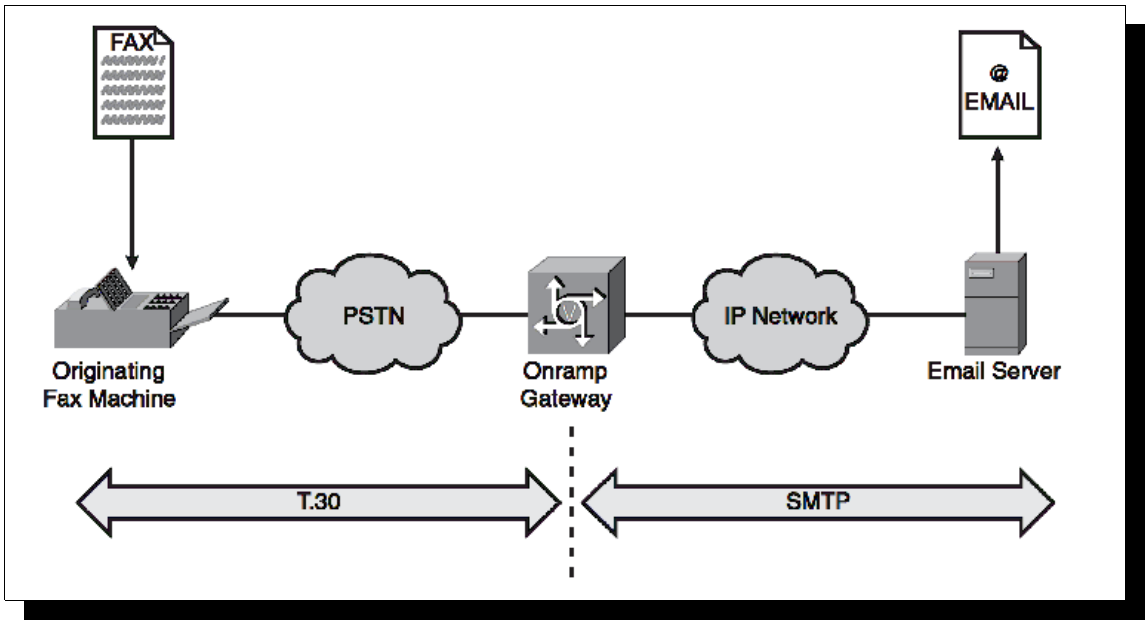
They merely claim, *ipsie dixit*, that such systems exists.[4] The Commission's policy should be grounded in facts and not speculation (or in this case, imagination).

First, a "fax" in this context is not a document, nor a "image file" of a document. It is the *transmission* of a rasterized digital payload (usually a document image) done in accordance with fax standards established by the International Telecommunications Union ("ITU") such as T.30 and the attendant standards including T.31, T.37, T.38, T.4, T.6, etc. Group III fax transmissions consist of 5 phases. You cannot receive a fax via e-mail nor can you receive an e-mail via fax a device typically referred to generically as a *gateway* must convert one to the other (and thus it is connected to two different networks, protocols, or media). Fax servers are simply onramp gateways dedicated to fax-to-email conversion. Faxes are sent to fax machines, which are *addressed* by a phone number and not by an e-mail address. After all, when an advertiser is sending fax ads to a target list, it is a target list of *phone numbers*, not a target list of e-mail addresses, IP addresses, web URLs, or other address forms.

The systems that receive the fax transmission via the fax protocols are each and every one of them a "telephone facsimile machine" as defined by the TCPA. Below is a illustration[5] of how a gateway operated by a fax service provider works:

[4] While Petitioner may sincerely believe such a device exists and is in use, such a belief is wrong and can only be based on a flawed understanding of the technology.

[5] David Hanes, *Fax, Modem, and Text for IP Telephony* (Cisco Press, 2008), p. 202.



This is typically referred to as T.37 "Onramp." The gateway receives the T.30 payload, saves it, and then forwards it in form suitable for attachment to an SMTP e-mail. It is connected to two different networks and uses two different and independent protocols. The fax server (gateway) can be as simple as a PC with a single analog phone line, or a large server with hundreds of digital phone lines.

In some instances, the fax server and e-mail sending may take place on the same computer. In other instances it will involve two different computers, such as fax server receiving the fax, then placing it into a queue where a different server may pick it up and package it into an e-mail, but in every case, the fax server is a "telephone facsimile machine" under the TCPA.

Another feature of a fax server is that each one has the capacity to print. This is due to 1) nearly all fax servers are constructed from standard server parts that include printing ports (serial, parallel, USB, infrared, etc.); 2) they are (by definition) connected to networks and thus can print to network-attached printers; and 3) because they (by

definition) can send e-mails with the fax images attached, they can utilize e-mail to printer functions (such as Hewlet Packard ePrint) to print.

Second, the contents of a fax transmission may be carried from point A to point B over multiple mediums with multiple stops or translations in between. In such a multi-step path, the "telephone facsimile machine" may not be at the ultimate destination, but rather at an intermediate point. For example consider the following:

> Suppose you will be staying away from your office for several weeks at a remote location that has no phone or Internet service, but you expect some important faxes to come to your office during your absence. To handle this, you appoint someone to take those faxes and FedEx them to you on a daily basis. A fax is sent to your office desktop fax machine. Then, the agent to whom you assigned the task takes that fax, puts it in a Federal Express envelope, and sends the faxed document to you at your remote location.

That is exactly how a fax server works. A fax is sent using fax protocols to a fax machine, where your agent (such as j2Global) receives the fax transmission for you on a fax server, then packages it in an e-mail envelope, and sends it to you via e-mail. The gateway operated by the fax service provider is analogous to the person you ask to forward your faxes in a Federal Express envelope.

The easiest way to analyze the system to see where in the system a "telephone facsimile machine" exists, is to simply look at how the sender addressed the targeted device. Did the sender "send" their missive to the recipient by using a telephone number to identify the destination? Where is the device in the loop using fax protocols that talks to the device that is originating the fax protocol? That's the receiving "telephone facsimile machine." In the above example, the sender of the fax did not "send" a Federal Express envelope... they sent a fax to a fax machine using a telephone number to address the destination.

Regardless of the number of intermediate "hops" or the number of intermediate systems between points A and B, if at some point your message is addressed to a telephone

number and sent via fax protocols, you are sending it to a device that "has the capacity . . . to transcribe text or images (or both) from an electronic signal received over a regular telephone line onto paper." That is not *ipse dixit*, it is a plain fact of telecommunications and logic.

Suppose the fax received in your office on the desktop fax machine in your office constituted a TCPA violation. Subsequently putting it into a Federal Express envelope does not vitiate the TCPA violation that has already occurred. Nor does it somehow "undo" the fact that it was sent to and received by a "telephone facsimile machine" as defined by the TCPA. In the same way, taking an already-received fax transmission and attaching it to an e-mail does not vitiate the TCPA violation that has already occurred. The Commission recognized this truism when it declared that sending an e-mail with a fax image attached to it does not create a TCPA violation, meaning that operators of fax servers (such as j2Global) do not commit TCPA violations when they take the already-received fax image and attach it to an e-mail.

The Petition is also misapprehends the nature of all faxes when it claims that "online fax services receive transmissions - from whatever type of device - as digital files." All fax transmissions send and receive "digital" files. This is no different for fax servers and desktop fax machines. The core T.30 standard incorporates well defined digital fax image file formats (such as set out in T.4 and T.6) and their compression algorithms. These files are sent and received in Phase "C" of the ITU-T fax protocols.

Now consider the reverse of the Federal Express package example. Suppose you send an advertisement via a Federal Express package to the person in your office and asked him to then fax it to a particular phone number. In this case, your agent (fax broadcaster) following your instructions sends your ad to the telephone number. That phone number might serve a desktop fax machine or may serve a fax server. But in each case, you send a

"fax" advertisement to a unique phone number that served a "telephone facsimile machine" under the TCPA.

Regular Telephone Line

Yet another fatal misunderstanding of the TCPA is evinced by the claim that for the TCPA to apply, the subject fax must be received over a "regular telephone line."

As a threshold matter, "receipt" of the fax is irrelevant to the TCPA. The statute is violated by "sending" not "receipt."[6] This makes sense because once the fax transmission enters the national telecommunications infrastructure, it impacts interstate commerce and its instrumentalities even before it is "received."

It appears that, perhaps, Petitioner was attempting to differentiate analog phone lines from digital phone lines. But this too is a fatally flawed analysis since the TCPA makes no such distinction between analog and digital transmissions.

I note that Petitioner did not suggest that a distinction between faxes received over an analog phone line versus a digital (VOIP) phone line should be treated different under the TCPA. This is of course true if for no other reason than the dictionary defines "regular" as "usual; normal; customary."[7] With millions of people who have their phone service delivered by the Internet (VOIP and FOIP) it is hard to claim such lines are "unusual" or "abnormal."[8] Millions of businesses obtain their phone service over digital circuits such as

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[6] *See, e.g.*, *Critchfield Physical Therapy v. Taranto Group, Inc.*, 263 P.3d 767, 778–79 (Kan. 2011) ("In prosecuting a claim under the TCPA, it is not necessary that a plaintiff demonstrate that a facsimile transmission was received by the plaintiff. It suffices that a plaintiff demonstrates that a facsimile transmission was unlawfully sent by the defendant."); *A Fast Sign Co., Inc. v. Am. Home Servs., Inc.*, 734 S.E.2d 31 (2012) (same). This is not to say that Article III standing analysis might be different for faxes sent in violation of the TCPA but not received, versus those that are received. I express no opinion on that matter in these comments.

[7] "regular." Dictionary.com Unabridged. Random House, Inc. 12 Jan. 2011. <Dictionary.com http://dictionary.reference.com/browse/regular>.

[8] Peter Davidson of Davidson Consulting documents 5.5 million users of fax servers and internet fax services, clearly illustrating VOIP/FOIP lines are widely used my millions of people.

a T1, and have been doing so for decades. T1 lines were first available in the 1960's.[9] It is not unusual" for many businesses to use a T1 line for voice calls or faxes. Such lines are plainly neither "unusual" nor "abnormal."

Furthermore, a limited definition of a "regular" telephone line leads to an absurd result. The Commission, and many industry experts, anticipate a transition away from an analog phone system, to a telephone system where every home and business uses only VOIP and FOIP.[10] At that point, there would no longer be any analog or "regular" telephone lines under Mr. Horak's definition, so the TCPA would fade away into a dead hand statute. Ultimately, such an interpretation is at odds with the FCC, which held:

> Finally, because a sender of a facsimile message has no way to determine whether it is being sent to a number associated with a stand-alone fax machine or to one associated with a personal computer or fax server, it would make little sense to apply different rules based on the device that ultimately received it.[11]

Another absurd outcome from treating digital lines or fax servers differently than analog lines or desktop fax machines is that a junk faxer like the infamous Fax.com[12] could have been completely immune from TCPA liability and FCC fines for the 2 million junk faxes it sent per day, by simply targeting fax server users when sending its faxes.

When a phone call is initiated in this country, an electronic connection is established for near-realtime communication between point A and point B. A phone call then takes

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[9] William S. Lee, Derrick C. Brown, *Advances in Telecommunications Networks,* (1995).

[10] *See, e.g., Comment Sought on Transition from Circuit-switched Network to All IP Network*, DA 09-2517 (FCC, Dec. 1, 2009) (Public Notice). In February of 2014 the FCC announced that Carbon Hill, Alabama and Delray Beach, Florida were selected as the first cities for such transitions on an experimental basis.

[11] *Rules and Regulations Implementing the TCPA*, 18 FCC Rcd 14014, ¶202 (2003).

[12] Fax.com was subjected to a $5.3 million fine for junk faxes by the FCC in 2002. See *Fax.com, Notice of Apparent Liability for Forfeiture*, 17 FCC Rcd 15927 (2002) ("Fax.com"), *aff'd* 19 FCC Rcd 748 (2004). The head of the company, Kevin Katz, fled the country and did not pay the fine.

place over that connection as is evidenced by the use of a telephone number to identify the destination. While one or both endpoints are frequently analog, the core of the PSTN is all digital. Signals that begin as analog are converted from analog to digital and then back again. Inside the core of the PSTN, digital data may follow multiple paths or be routed over the Internet.[13] This is true regardless of whether the phone call is a voice call, or a data call such as a fax. Practically every call in North America is carried (at least some portion) over digital lines. These are all "regular" telephone calls and "regular" telephone lines.

Petitioner is also wrong when it states:

> [O]nline fax services do not occupy the recipient's facsimile machine so that it is unavailable for other messages. Indeed, the recipient does not even need a fax machine to receive an online fax transmission.

This shows that Petitioner again misapprehends how fax services work. The customer of a fax service leases use of a remote fax machine and fax number from the fax service. An unwanted junk fax sent to the fax number and fax machine the customer leases from the fax service certainly does cause interruption and expense to the receiving fax machine operated by the online fax service (which ties up capacity and increases cost to the service and thus to the customers of that service). The customer's incoming fax number is operated solely for the consumer who subscribes to that number, and incoming junk fax is interfering with that customer's exclusive use of that fax number.

At one time I had an eFax account, but I had to terminate it because too many junk faxes cause me to exceed my allotted quota, so I had to pay more to keep the service. If the millions of consumers who use e-fax services were to be declared TCPA exempt, those services would become unusable clogged with junk faxes and no recourse to the consumers.

[13] Such as SIGTRAN, which is used to carry PSTN signaling over IP.

There can be no denial that the capacity of the national telecommunications infrastructure is finite. We each experience busy signals and reorder tones that mean our calls don't go through because of capacity issues. Costs for an individual instance of such interference may be small but:

> The constant recurrence of small expenses in time eats up a fortune. The expense does not take place at once, and therefore is not observed; the mind is deceived, as in the fallacy which says that "if each part is little, then the whole is little." This is true in one way, but not in another, for the whole and the all are not little, although they are made up of littles.[14]

A few cents per fax, when multiplied by the over 2 billion junk faxes sent each year[15] is a number that is not "little."

Junk faxes cause more than pecuniary harms such as opportunity costs when a purchase order or a resume is accidentally discarded along with a junk fax; or when a time-critical fax is delayed because the recipient's fax number is tied up with a junk fax; or when the end of your paper or toner is used up by a junk fax, so the next (legitimate) fax fails to come through. Every fax attempt injures the called party by tying up the line, and occupying capacity on the infrastructure that excludes other calls.

Finally, even the e-mails that result from junk faxes received on fax servers are a unique additional harm in an of themselves. The fax image e-mail attachments are large (sometimes VERY large) bitmapped images, a thousand times larger than a conventional e-mail message. They are particularly onerous when downloading your e-mail over a slow link or over a cell phone. They eat up your data allotment. They are the equivalent of junk mail sent postage due but that you can't refuse.

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[14] Aristotle, *Politics*, Bk. 5, Ch. 8 (Jowett trans.)

[15] S. Rep. No. 108-381, 108th Congress 2d Sess. (2005) at 14. *See* also Bruce Horovitz, *Like Garbo, Americans want to be left alone*, USA Today, (Oct. 15, 2003).

CONCLUSION

The Petition is based on false premises and deeply flawed misrepresentations of fax technology. The Commission's long standing rulings on application of the TCPA to faxes sent to fax servers are correct and appropriate.

Thank you very much for your time considering my comments. I remain,

Sincerely

/s/ Robert Biggerstaff
Robert Biggerstaff, CCE
September 1, 2017

Cert. No. 1360