

PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 13-4625

In Re: UNDER SEAL

UNITED STATES OF AMERICA,

Plaintiff - Appellee,

v.

LAVABIT, LLC.; LADAR LEVISON,

Parties-in-Interest - Appellants.

AMERICAN CIVIL LIBERTIES UNION; AMERICAN CIVIL LIBERTIES
UNION OF VIRGINIA; EMPEOPLED, LLC.; ELECTRONIC FRONTIER
FOUNDATION,

Amici Supporting Appellants.

No. 13-4626

In Re: GRAND JURY PROCEEDINGS

UNITED STATES OF AMERICA,

Plaintiff - Appellee,

v.

LAVABIT, LLC.; LADAR LEVISON,

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Appeals from the United States District Court for the Eastern District of Virginia, at Alexandria. Claude M. Hilton, Senior District Judge. (1:13-sw-00522-CMH-1; 1:13-dm-00022-CMH-1)

Argued: January 28, 2014

Decided: April 16, 2014

Before NIEMEYER, GREGORY, and AGEE, Circuit Judges.

Affirmed by published opinion. Judge Agee wrote the opinion, in which Judge Niemeyer and Judge Gregory joined.

ARGUED: Ian James Samuel, New York, New York, for Appellants. Andrew Peterson, OFFICE OF THE UNITED STATES ATTORNEY, Alexandria, Virginia, for Appellee. **ON BRIEF:** Jesse R. Binnall, BRONLEY & BINNALL, PLLC, Fairfax, Virginia; Marcia Hofmann, LAW OFFICE OF MARCIA HOFMANN, San Francisco, California; David Warrington, Laurin Mills, LECLAIRRYAN, Alexandria, Virginia, for Appellants. Mythili Raman, Acting Assistant Attorney General, Criminal Division, Nathan Judish, Josh Goldfoot, Benjamin Fitzpatrick, Brandon Van Grack, UNITED STATES DEPARTMENT OF JUSTICE, Washington, D.C.; Dana J. Boente, Acting United States Attorney, Michael Ben'Ary, James L. Trump, OFFICE OF THE UNITED STATES ATTORNEY, Alexandria, Virginia, for Appellee. Alexander A. Abdo, Brian M. Hauss, Catherine Crump, Nathan F. Wessler, Ben Wizner, AMERICAN CIVIL LIBERTIES UNION FOUNDATION, New York, New York; Rebecca K. Glenberg, AMERICAN CIVIL LIBERTIES UNION OF VIRGINIA FOUNDATION, INC., Richmond, Virginia, for Amici American Civil Liberties Union and ACLU of Virginia. Kurt Opsahl, Jennifer Lynch, Hanni Fakhoury, ELECTRONIC FRONTIER

FOUNDATION, San Francisco, California, for Amicus Electronic
Frontier Foundation. Richard M. Martinez, Mahesha P.
Subbaraman, ROBINS, KAPLAN, MILLER & CIRESI, L.L.P.,
Minneapolis, Minnesota, for Amicus Empeopled, LLC.

AGEE, Circuit Judge:

Lavabit LLC is a limited liability company that provided email service. Ladar Levison is the company's sole and managing member.¹

In 2013, the United States sought to obtain certain information about a target² in a criminal investigation. To further that goal, the Government obtained court orders under both the Pen/Trap Statute, 18 U.S.C. §§ 3123-27, and the Stored Communications Act, 18 U.S.C. §§ 2701-12, requiring Lavabit to turn over particular information related to the target. When Lavabit and Levison failed to comply with those orders, the district court held them in contempt and imposed monetary sanctions. Lavabit and Levison now appeal the sanctions.

For the reasons below, we affirm the judgment of the district court.

¹ The record does not reflect the state of Lavabit's organization or registration to do business. Neither does the record contain documents that verify the ownership of Lavabit's membership interests or the identity of its managing member. The parties and the district court assumed below that Lavabit and Levison were "[o]ne and the same." (J.A. 115.) As no party has indicated otherwise, we will also assume that Levison owns all interests in Lavabit and is fully authorized to act in all matters on Lavabit's behalf.

² Because of the nature of the underlying criminal investigation, portions of the record, including the target's identity, are sealed.

I.

A.

This case concerns the encryption processes that Lavabit used while providing its email service. Encryption describes the process through which readable data, often called "plaintext," is converted into "ciphertext," an unreadable jumble of letters and numbers. Decryption describes the reverse process of changing ciphertext back into plaintext. Both processes employ mathematical algorithms involving "keys," which facilitate the change of plaintext into ciphertext and back again.

Lavabit employed two stages of encryption for its paid subscribers: storage encryption and transport encryption. Storage encryption protects emails and other data that rests on Lavabit's servers. Theoretically, no person other than the email user could access the data once it was so encrypted. By using storage encryption, Lavabit held a unique market position in the email industry, as many providers do not encrypt stored data.

Although Lavabit's use of storage encryption was novel, this case primarily concerns Lavabit's second stage of encryption, transport encryption. This more common form of encryption protects data as it moves in transit between the client and the server, creating a protected transmission channel

for internet communications. Transport encryption protects not just email contents, but also usernames, passwords, and other sensitive information as it moves. Without this type of encryption, internet communications move exposed en route to their destination, allowing outsiders to "listen in." Transport encryption also authenticates -- that is, it helps ensure that email clients and servers are who they say they are, which in turn prevents unauthorized parties from exploiting the data channel.

Like many online companies, Lavabit used an industry-standard protocol called SSL (short for "Secure Sockets Layer") to encrypt and decrypt its transmitted data. SSL relies on public-key or asymmetric encryption, in which two separate but related keys are used to encrypt and decrypt the protected data. One key is made public, while the other remains private. In Lavabit's process, email users would have access to Lavabit's public keys, but Lavabit would retain its protected, private keys. This technology relies on complex algorithms, but the basic idea is akin to a self-locking padlock: if Alice wants to send a secured box to Bob, she can lock the box with a padlock (the public key) and Bob will open it with his own key (the

private key). Anyone can lock the padlock, but only the key-holder can unlock it.³

The security advantage that SSL offers disappears if a third party comes to possess the private key. For example, a third party holding a private key could read the encrypted communications tied to that key as they were transmitted. In some circumstances, a third party might also use the key to decrypt past communications (although some available technologies can thwart that ability). And, with the private key in hand, the third party could impersonate the server and launch a man-in-the-middle attack.

When a private key becomes anything less than private, more than one user may be compromised. Like some other email providers, Lavabit used a single set of SSL keys for all its various subscribers for technological and financial reasons. Lavabit in particular employed only five key-pairs, one for each

³ Our description oversimplifies a very complicated process that can vary depending on what cipher suites and protocols are used. In reality, a client and a server engage in an SSL "handshake" involving several different communication steps between the client and the server: initial "hellos," server authentication using an SSL certificate, potential client authentication, sending (by the client) and decryption (by the server) of a pre-master secret, generation of a master secret, generation of session keys, and formal completion of the handshake. Later communications within the same session then use the generated session keys to both encrypt and decrypt all the information transmitted during the session. It is also possible to conduct an abbreviated handshake.

of the mail protocols that it supported.⁴ As a result, exposing one key-pair could affect all of Lavabit's estimated 400,000-plus email users.

B.

With this technical background in mind, we turn to the case before us.

1.

On June 28, 2013, the Government sought and obtained an order ("the Pen/Trap Order") from a magistrate judge authorizing the placement of a pen register and trace-and-trap device on Lavabit's system. This "pen/trap" device is intended to allow the Government to collect certain information, on a real-time basis, related to the specific investigatory target's Lavabit email account.⁵ In accordance with the Pen/Trap Statute, 18 U.S.C. §§ 3121-27, the Pen/Trap Order permitted the Government to "capture all non-content dialing, routing, addressing, and

⁴ Email protocols are the technical means by which users and servers transmit messages over a network. A given user may choose to use one of a variety of email protocols, so Lavabit was equipped to handle that choice.

⁵ A pen register captures outgoing signaling and addressing information, while a trap/trace device captures that information for incoming messages. See 18 U.S.C. § 3127(3), (4). As to email, the same device often performs both functions and is frequently referred to as a pen/trap device.

signaling information . . . sent from or sent to" the target's account. (J.A. 10.) In other words, the Pen/Trap Order authorized the Government to collect metadata⁶ relating to the target's account, but did not allow the capture of the contents of the target's emails. The Pen/Trap Order further required Lavabit to "furnish [to the Government] . . . all information, facilities, and technical assistance necessary to accomplish the installation and use of the pen/trap device unobtrusively and with minimum interference." (J.A. 11.)

On the same day that the Pen/Trap Order issued, FBI agents met with Levison, who indicated that he did not intend to comply with the order. Levison informed the agents that he could not provide the requested information because the target-user "had enabled Lavabit's encryption services," presumably referring to Lavabit's storage encryption. (J.A. 7.) But, at the same time, Levison led the Government to believe that he "had the technical capability to decrypt the [target's] information." (J.A. 6.) Nevertheless, Levison insisted that he would not exercise that

⁶ Metadata, sometimes called envelope information, describes "the how, when, and where of the message." Orin S. Kerr, The Next Generation Communications Privacy Act, 162 U. Pa. L. Rev. 373, 384 (2014). It includes "IP addresses, to-from information on emails, login times, and locations." Id. The Pen/Trap Order described what specific metadata the Government was authorized to collect.

ability because "Lavabit did not want to 'defeat [its] own system.'" (J.A. 6.)

In view of Levison's response, the Government obtained an additional order that day compelling Lavabit to comply with the Pen/Trap Order. This "June 28 Order," again issued by a magistrate judge, instructed Lavabit to "provide the [FBI] with unencrypted data pursuant to the [Pen/Trap] Order" and reiterated that Lavabit was to provide "any information, facilities, or technical assistance . . . under the control of Lavabit . . . [that was] needed to provide the FBI with the unencrypted data." (J.A. 9.) Further, the June 28 Order put Lavabit and Levison on notice that any "[f]ailure to comply" could result in "any penalty within the power of the Court, including the possibility of criminal contempt of Court." (J.A. 9.)

2.

Over the next eleven days, the Government attempted to talk with Levison about implementing the Pen/Trap Order. Levison, however, ignored the FBI's repeated requests to confer and did not give the Government the unencrypted data that the June 28 Order required. As each day passed, the Government lost forever the ability to collect the target-related data for that day.

Because Lavabit refused to comply with the prior orders, the Government obtained an order to show cause from the district court on July 9. The show cause order directed both Lavabit and Levison, individually, to appear and "show cause why Lavabit LLC ha[d] failed to comply with the orders entered June 28, 2013[] in this matter and why [the] Court should not hold Mr. Levison and Lavabit LLC in contempt for its disobedience and resist[ance] to these lawful orders." (J.A. 21.) Entry of the show cause order spurred a conference call between Levison, his counsel, and representatives from the Government on July 10. During that call, the parties discussed how the Government could install the pen/trap device, what information the device could capture, and how the Government could view and preserve that information. In addition, the Government asked whether Levison would provide the keys necessary to decrypt the target's encrypted information. Although the Government again stressed that it was permitted to collect only non-content data, neither Levison nor his counsel indicated whether Lavabit would allow the Government to install and use the pen/trap device.⁷

⁷ Levison contacted the Government the day after the July 10 call to say that he would not appear at the show cause hearing unless the Government reimbursed his travel expenses. In response, the Government issued a grand jury subpoena to Levison, which permitted it to cover his expenses. That subpoena, which was later withdrawn, also required Levison to produce Lavabit's encryption keys.

On July 13, 2013, four days after the show cause order issued, Levison contacted the Government with his own proposal as to how he would comply with the court's orders. In particular, Levison suggested that Lavabit would itself collect the Government's requested data:

I now believe it would be possible to capture the required data ourselves and provide it to the FBI. Specifically the information we'd collect is the login and subsequent logout date and time, the IP address used to connect to the subject email account and [several] non-content headers . . . from any future emails sent or received using the subject account. . . . Note that additional header fields could be captured if provided in advance of my implementation effort.

(J.A. 83.) Levison conditioned his proposal with a requirement that the Government pay him \$2,000 for his services. More importantly, Levison also intended to provide the data only "at the conclusion of the 60[-]day period required by the [Pen/Trap] Order . . . [or] intermittently[,] . . . as [his] schedule allow[ed]." (J.A. 83.) If the Government wanted daily updates, Levison demanded an additional \$1,500.⁸

The Government rejected Levison's proposal, explaining that it needed "real-time transmission of results." (J.A. 83.) Moreover, the Government would have no means to verify the

⁸ Although the Pen/Trap Order authorized compensation for "reasonable expenses" to Lavabit (J.A. 11), neither Lavabit nor Levison ever requested compensation from the district court. Levison also did not attempt to show the Government that his proposed fees were requests for "reasonable expenses" that could be reimbursed.

accuracy of the information that Lavabit proposed to provide -- a concerning limit given Lavabit's apparent hostility toward the Government. Levison responded by insisting that the Pen/Trap Order did not require real-time access, but did not otherwise attempt to comply with the Pen/Trap Order or the June 28 Order.

3.

On July 16, 2013, three days after the Government received Levison's proposal and the same day as the show cause hearing, the Government obtained a seizure warrant from the district court under the Stored Communications Act ("SCA"). See 18 U.S.C. §§ 2701-12. The seizure warrant provided that Lavabit was to turn over "[a]ll information necessary to decrypt communications sent to or from [the target's] Lavabit email account . . . , including encryption keys and SSL keys." (J.A. 27.) In addition, the warrant covered "[a]ll information necessary to decrypt data stored in or otherwise associated with [the target's] Lavabit account." (J.A. 27.)

4.

On July 16, Levison appeared before the district court pro se,⁹ on behalf of himself and Lavabit, for the show cause hearing. When asked whether he planned to comply with the Pen/Trap Order, Levison responded that he had "always agreed to the installation of the pen register device." (J.A. 42.) Nonetheless, Levison objected to turning over his private SSL encryption keys "because that would compromise all of the secure communications in and out of [his] network, including [his] own administrative traffic." (J.A. 42.) He also maintained that "[t]here was never an explicit demand [from the Government] that [he] turn over the keys." (J.A. 45.)

The district court and the parties initially discussed whether the Pen/Trap Order required Lavabit to produce its encryption keys. The district court observed that the Pen/Trap Order's "technical assistance" provision may or may not encompass the keys, but it declined to reach the issue during the show cause hearing "because [he had] issued a search warrant for that." (J.A. 43.) The Government agreed that it had sought the seizure warrant to "avoid litigating [the] issue" of whether the Pen/Trap Order reached the encryption keys (J.A. 43), but

⁹ The record does not reflect why Lavabit and Levison's prior counsel was no longer representing them.

contended that the Pen/Trap Order and the June 28 Order "required the encryption keys to be produced" (J.A. 45).

After Levison assured the district court that he would permit the Government to install a pen/trap device on Lavabit's system, the district court did not inquire further into whether Levison would turn over his encryption keys. The district court concluded that it need not yet resolve the matter because Levison had not been served with the seizure warrant and had not been called before the grand jury (as was anticipated by the then-outstanding grand jury subpoena). The district court then scheduled another hearing for July 26 to confirm that Lavabit had fully complied.

After the show cause hearing, Lavabit did permit the Government to install a pen/trap device. But, without the encryption keys, much of the information transmitted to and from Lavabit's servers remained encrypted, indecipherable, and useless. The pen/trap device was therefore unable to identify what data within the encrypted data stream was target-related and properly collectable.

5.

Shortly before the scheduled hearing on compliance, Lavabit and Levison, now again represented by counsel, moved to quash the seizure warrant. In relevant part, their motion argued that

the warrant (1) amounted to an impermissible general warrant barred by the Fourth Amendment; (2) sought immaterial information; and (3) imposed an undue burden on Lavabit's business.

In response, the Government contended that the warrant merely "re-state[d] and clarif[ied] Lavabit's obligations under the Pen-Trap Act to provide that same information." (J.A. 86.) The Government noted that four different legal obligations, including the Pen/Trap Order and the June 28 Order, required Lavabit to produce the encryption keys. Lavabit's motion to quash, however, did not mention either the Pen/Trap Order or the June 28 Order.

6.

On August 1, over a month after the Pen/Trap Order first issued, the district court held its second hearing.¹⁰ The court remarked that "[t]he difficulty or the ease in obtaining the information [didn't] have anything to do with whether or not the government's lawfully entitled to that information." (J.A. 108.) For that reason, the district court denied the motion to quash the Government's "very narrow, specific" warrant. (J.A. 108.) The court also found it reasonable that the Government

¹⁰ Nothing in the record indicates why the hearing, originally set for July 26, 2013, was delayed to August 1.

would not collect all users' data, even if the encryption keys would practically enable the Government to access all that data.

The district court then entered an order (the "August 1 Order") directing Lavabit to turn over its encryption keys. The order further instructed Lavabit to provide the Government "any other 'information, facilities, and technical assistance necessary to accomplish the installation and use of the pen/trap device' as required by the July 16, 2013 seizure warrant and the [Pen/Trap Order]." (J.A. 118-19.) The August 1 Order directed Lavabit and Levison to turn over the encryption keys by 5:00 pm on August 2, 2013.

7.

Despite the unequivocal language of the August 1 Order, Lavabit dallied and did not comply. Just before the 5:00 pm August 2 deadline, for instance, Levison provided the FBI with an 11-page printout containing largely illegible characters in 4-point type, which he represented to be Lavabit's encryption keys. The Government instructed Lavabit to provide the keys in an industry-standard electronic format by the morning of August 5. Lavabit did not respond.

On August 5, nearly six weeks after the Government first obtained the Pen/Trap Order, the Government moved for sanctions against Levison and Lavabit for their continuing "failure to

comply with [the] Court's order entered August 1." (J.A. 120.) The Government sought penalties of \$5,000 a day until Lavabit provided the encryption keys to the Government. The district court granted the motion for sanctions that day.

Two days later, Levison provided the keys to the Government. By that time, six weeks of data regarding the target had been lost.¹¹

8.

Lavabit and Levison timely appealed, and we have jurisdiction under 28 U.S.C. § 1291. See United States v. Myers, 593 F.3d 338, 344 n.9 (4th Cir. 2010) ("[A] civil-contempt order may be immediately appealed by a non[-]party [to the underlying action]."); see also Buffington v. Balt. Cnty., Md., 913 F.2d 113, 133 (4th Cir. 1990) (explaining that civil contempt includes "a fine that would be payable to the court . . . when the [contemnor] can avoid paying the fine simply by performing the affirmative act required by the court's order"). We further note that the appeal presents a live controversy even

¹¹ After Levison provided the keys to the Government, he also shut Lavabit down entirely. In a public statement, Levison did not reveal the specific reasons behind his decision to close Lavabit. He did post, however, a statement on the Lavabit website explaining that he would not "become complicit in crimes against the American people." Lavabit, <http://www.lavabit.com> (last visited Mar 3, 2014).

though Lavabit has now complied with the underlying orders, as Lavabit and Levison still face potential assessments based on their conduct in refusing to comply with the district court's orders. See In re Grand Jury Subpoena (T-112), 597 F.3d 189, 195 (4th Cir. 2010).

II.

A.

As a party appealing from a civil contempt order, Lavabit¹² may ask us to consider "whether contempt was proper" and may challenge "the order alleged to have been violated" unless "earlier appellate review was available." United States v. Myers, 593 F.3d at 344. In the ordinary case, we review the ultimate decision as to whether the contempt was proper for abuse of discretion, the underlying legal questions de novo, In re Grand Jury Subpoena, 597 F.3d at 195, and any factual findings for clear error, Oaks of Mid City Resident Council v. Sebelius, 723 F.3d 581, 584 (5th Cir. 2013); cf. United States v. Peoples, 698 F.3d 185, 189 (4th Cir. 2012) (same as to criminal contempt). Lavabit failed, however, to raise most of

¹² For simplicity's sake, we refer only to "Lavabit" for the remainder of the opinion. That term, however, includes both Lavabit and Levison unless the context reflects otherwise.

its present arguments before the district court; that failure significantly alters the standard of review.

B.

In the district court, Lavabit failed to challenge the statutory authority for the Pen/Trap Order, or the order itself, in any way. Yet on appeal, Lavabit suggests that the district court's demand for the encryption keys required more assistance from it than the Pen/Trap Statute requires. Lavabit never mentioned or alluded to the Pen/Trap Statute below, much less the district court's authority to act under that statute. In fact, with the possible exception of an undue burden argument directed at the seizure warrant, Lavabit never challenged the district court's authority to act under either the Pen/Trap Statute or the SCA.

"The matter of what questions may be taken up and resolved for the first time on appeal is one left primarily to the discretion of the courts of appeals, to be exercised on the facts of individual cases." Singleton v. Wulff, 428 U.S. 106, 121 (1976). In this circuit, we exercise that discretion sparingly. Our settled rule is simple: "[a]bsent exceptional circumstances, . . . we do not consider issues raised for the first time on appeal." Robinson v. Equifax Info. Servs., LLC, 560 F.3d 235, 242 (4th Cir. 2009); see also Agra, Gill & Duffus,

Inc. v. Benson, 920 F.2d 1173, 1176 (4th Cir. 1990) ("We will not accept on appeal theories that were not raised in the district court except under unusual circumstances.").

When a party in a civil case fails to raise an argument in the lower court and instead raises it for the first time before us, we may reverse only if the newly raised argument establishes "fundamental error" or a denial of fundamental justice. Stewart v. Hall, 770 F.2d 1267, 1271 (4th Cir. 1985). "Fundamental error" is "more limited" than the "plain error" standard that we apply in criminal cases. Id.; accord Shcherbakovskiy v. Da Capo Al Fine, Ltd., 490 F.3d 130, 142 (2d Cir. 2007) ("To meet this [fundamental error] standard, a party must demonstrate even more than is necessary to meet the plain error standard in a criminal trial."). So, when a party in a civil case fails to meet the plain-error standard, we can say with confidence that he has not established fundamental error. See, e.g., In re Celotex Corp., 124 F.3d 619, 631 (4th Cir. 1997) (describing the criminal plain-error standard as a "minimum" standard that must be met before undertaking discretionary review of a waived argument in a civil case).¹³

¹³ Two things might explain the higher standard that applies in civil cases. First, "Federal Rule of Criminal Procedure 52(b) affords federal appellate courts the discretion to correct certain forfeited errors in the criminal context," but in the civil context (excepting jury instructions), "such discretion is (Continued)

Thus, we may use the criminal, plain-error standard -- articulated by United States v. Olano, 507 U.S. 705, 730 (1993) -- as something of an intermediate step in a civil case. See, e.g., Brickwood Contractors, Inc. v. Datanet Eng'g, Inc., 369 F.3d 385, 396 (4th Cir. 2004) (applying Olano standard in civil case). Under that familiar standard, we cannot reverse if the party fails to establish: "(1) there is an error; (2) the error is plain; (3) the error affects substantial rights; and (4) the court determines . . . that the error seriously affects the fairness, integrity or public reputation of judicial proceedings." Celotex, 124 F.3d at 630-31. Even the lesser showing needed for "[p]lain error review is strictly circumscribed, and meeting all four prongs is difficult, as it should be." United States v. Byers, 649 F.3d 197, 213 (4th Cir. 2011) (quotation marks and alteration omitted).

We employ these rules not to trap unwary litigants, but to advance several important and "obvious" purposes. Wheatley v. Wicomico Cnty., Md., 390 F.3d 328, 335 (4th Cir. 2004). Among

judicially created." Celotex, 124 F.3d 619, 630 n.6 (4th Cir. 1997). As a judicial construction, it should be narrowly construed. Cf. In re ESA Env'tl. Specialists, Inc., 70 F.3d 388, 394 n.5 (4th Cir. 2013) (stating that a "judicially created exception" to a rule should be "narrowly construed"). Second, plain-error review arose in the criminal context to protect the defendant's "substantial liberty interests," but "[s]uch interests normally are not at stake in civil litigation." Deppe v. Tripp, 863 F.2d 1356, 1364 (7th Cir. 1988).

other things, forfeiture and waiver rules offer “respect for the [integrity of the] lower court, [avoid] unfair surprise to the other party, and [acknowledge] the need for finality in litigation and conservation of judicial resources.” Holly Hill Farm, 447 F.3d at 267. Our sister circuits have suggested other reasons beyond these: waiver rules ensure that the parties develop the necessary evidence below, In re Diet Drugs Prod. Liab. Litig., 706 F.3d 217, 226 (3d Cir. 2013), and “prevent parties from getting two bites at the apple by raising two distinct arguments,” Fleishman v. Cont’l Cas. Co., 698 F.3d 598, 608 (7th Cir. 2012); see also HTC Corp. v. IPCom GmbH & Co., KG, 667 F.3d 1270, 1282 (Fed. Cir. 2012) (collecting cases). The Supreme Court has likewise warned us not to lightly dismiss the many interests underlying preservation requirements. See, e.g., Wood v. Milyard, 132 S. Ct. 1826, 1834 (2012) (“Due regard for the trial court’s processes and time investment is also a consideration appellate courts should not overlook.”); Exxon Shipping Co. v. Baker, 554 U.S. 471, 487 n.6 (2008) (“[T]he complexity of a case does not eliminate the value of waiver and forfeiture rules, which ensure that parties can determine when an issue is out of the case, and that litigation remains, to the extent possible, an orderly progression.”).

Forfeiture and waiver principles apply with equal force to contempt proceedings. See, e.g., In re Gates, 600 F.3d 333, 337

(4th Cir. 2010) (applying plain-error standard to unpreserved claim of error in criminal contempt proceedings); United States v. Neal, 101 F.3d 993, 996 (4th Cir. 1996) (same). If anything, "[t]he axiom that an appellate court will not ordinarily consider issues raised for the first time on appeal takes on added significance in the context of contempt." In re Bianchi, 542 F.2d 98, 100 (1st Cir. 1976) (internal citation omitted). After all, "[d]enying the court of which [a party] stands in contempt the opportunity to consider the objection or remedy is in itself a contempt of [that court's] authority and an obstruction of its processes." Id. (quotation marks omitted).

C.

Lavabit argues that it preserved an appellate challenge to the Pen/Trap Order when Levison objected to turning over the encryption keys at the initial show cause hearing. We disagree.

In making his statement against turning over the encryption keys to the Government, Levison offered only a one-sentence remark: "I have only ever objected to turning over the SSL keys because that would compromise all of the secure communications in and out of my network, including my own administrative traffic." (J.A. 42.) This statement -- which we recite here verbatim -- constituted the sum total of the only objection that Lavabit ever raised to the turnover of the keys under the

Pen/Trap Order. We cannot refashion this vague statement of personal preference into anything remotely close to the argument that Lavabit now raises on appeal: a statutory-text-based challenge to the district court's fundamental authority under the Pen/Trap Statute. Levison's statement to the district court simply reflected his personal angst over complying with the Pen/Trap Order, not his present appellate argument that questions whether the district court possessed the authority to act at all.

Arguments raised in a trial court must be specific and in line with those raised on appeal. "To preserve an issue for appeal, an objection [or argument] must be timely and state the grounds on which it is based." Kollsman, a Div. of Sequa Corp. v. Cohen, 996 F.2d 702, 707 (4th Cir. 1993). It follows then that "an objection on one ground does not preserve objections based on different grounds." United States v. Massenburt, 564 F.3d 337, 342 n.2 (4th Cir. 2009).¹⁴ Similarly, a party does not go far enough by raising a non-specific objection or claim.

¹⁴ We have emphasized this point many times before. See, e.g., United States v. Zayyad, 741 F.3d 452, 459 (4th Cir. 2014) ("To preserve an argument on appeal, the [party] must object on the same basis below as he contends is error on appeal."); Laber v. Harvey, 438 F.3d 404, 429 n.24 (4th Cir. 2006) ("These are different arguments entirely, and making the one does not preserve the other."); United States v. Banisadr Bldg. Joint Venture, 65 F.3d 374, 379 (4th Cir. 1995) ("[A] theory not raised at trial cannot be raised on appeal.").

"[I]f a party wishes to preserve an argument for appeal, the party must press and not merely intimate the argument during the proceedings before the district court." Dallas Gas Partners, L.P. v. Prospect Energy Corp., 733 F.3d 148, 157 (5th Cir. 2013); see also United States v. Bennett, 698 F.3d 194, 199 (4th Cir. 2012) (finding defendant waived argument where his argument below was "too general to alert the district court to the specific [objection]").

In arguing that it can still pursue the issue despite its failure to raise any specific argument challenging the Pen/Trap Order below, Lavabit gives far too broad a reading to Yee v. City of Escondido, 503 U.S. 519, 534 (1992). Yee explained that, "[o]nce a federal claim is properly presented, a party can make any argument in support of that claim; parties are not limited to the precise arguments they made below." 503 U.S. at 534. We, too, have recognized our need to "consider any theory plainly encompassed by the submissions in the underlying litigation." Volvo Constr. Equip. N. Am., Inc. v. CLM Equip. Co., 386 F.3d 581, 604 (4th Cir. 2004).

Yet Lavabit neither "plainly" nor "properly" identified these issues for the district court, and a comparison between this case and Yee illustrates why. In Yee, the parties raised before the district court a Fifth Amendment takings claim premised on physical occupation. 503 U.S. at 534-35. Before

the Supreme Court, however, they argued that the taking occurred by regulation. Id. The difference in form there was immaterial because the appealing party asked both courts to evaluate the same fundamental question: whether the challenged acts constituted a taking. In other words, the appellant/petitioner in Yee raised two variations of the same basic argument. In contrast, the difference in the case at bar is marked and material: Lavabit never challenged the statutory validity of the Pen/Trap Order below or the court's authority to act. To the contrary, Lavabit's only point below alluded to the potential damage that compliance could cause to its chosen business model.¹⁵

Neither the district court nor the Government therefore had any signal from Lavabit that it contested the district court's authority under the Pen/Trap Statute to enter the Pen/Trap Order or the June 28th Order. In fact, by conceding at the August 1 hearing "that the [G]overnment [was] entitled to the [requested] information," it likely led the district court to believe exactly the opposite. (J.A. 108.) Accordingly, Lavabit failed to preserve any issue for appeal related to the Pen/Trap Statute or the district court's authority to act under it. See Nelson

¹⁵ We might characterize this argument as some type of undue burden challenge. But, on appeal, Lavabit does not raise any undue burden argument as to the Pen/Trap Order. Instead, it limits its burden arguments to the seizure warrant.

v. Adams USA, Inc., 529 U.S. 460, 469 (2000) (“[T]he general rule that issues must be raised in lower courts in order to be preserved as potential grounds of decision in higher courts . . . requires that the lower court be fairly put on notice as to the substance of the issue.”).

D.

Lavabit contends that, even if it failed to raise a cognizable objection to the Pen/Trap Order in the district court, then the Government and the district court induced it to forfeit its present challenges. We know of no case recognizing an “invited” or “induced” waiver exception to the traditional forfeiture and waiver principles. Lavabit has not identified any basis for such an exception, other than its subjective belief that it is now in an “unfair” position. But that is not an argument that permits us to cast aside the well-understood interests underlying our preservation requirements. Cf. Hawkins v. United States, 724 F.3d 915, 918 (7th Cir. 2013) (“Finality is an institutional value and it is tempting to subordinate such a value to the equities of the individual case. But there are dangers, especially if so vague a term as ‘fairness’ is to be the touchstone.”).

In any event, we disagree with Lavabit's factual premise, as neither the Government nor the district court induced or invited Lavabit to waive anything.

The Government did not lead Lavabit to believe that the Pen/Trap Order was somehow irrelevant. To be sure, the Government focused more on the seizure warrant than the Pen/Trap Order at certain times in the proceedings. At the August 1 hearing, for example, the Government concentrated on the seizure warrant and the later-withdrawn grand jury subpoena because the motion under consideration -- Lavabit's motion to quash -- only addressed those two objects. The Government, however, never stopped contending that the Pen/Trap Order, in and of itself, also required Lavabit to turn over the encryption keys. For example, the Government specifically invoked the Pen/Trap Order in its written response to Lavabit's motion to quash by noting that "four separate legal obligations" required Lavabit to provide its encryption keys, including the Pen/Trap Order and the June 28 Order. (J.A. 86.) If Lavabit truly believed the Pen/Trap Order to be an invalid request for the encryption keys, then the Government's continuing reliance on that order should have spurred Lavabit to challenge it.

The district court's actions also put Lavabit on notice that the Pen/Trap Order implicated Lavabit's encryption keys. The June 28 Order referred to encryption, and the August 1 order

compelling Lavabit to turn over its keys relied upon two independent sources of authority: "the July 16, 2013 seizure warrant and the June 28, 2013 [Pen/Trap Order]." (J.A. 119 (emphasis added).) The August 1 Order, with its plain and unequivocal citation to the Pen/Trap Order, informed Lavabit that the Pen/Trap Order needed to be addressed because it was the cited authority for the turnover of the encryption keys. Even if the district court had earlier equivocated about whether the Pen/Trap Order reached Lavabit's encryption keys, those doubts were dispelled once the August 1 Order issued.¹⁶ "When the terms of a judgment conflict with either a written or oral opinion or observation, the judgment must govern." Murdaugh Volkswagen, Inc. v. First Nat'l Bank of S.C., 741 F.2d 41, 44 (4th Cir. 1984); see also id. ("Courts must speak by orders and judgments, not by opinions, whether written or oral, or by chance observations or expressed intentions made by courts during, before or after trial, or during argument."). At an absolute minimum, if Lavabit believed that the turnover of the keys was invalid under the Pen/Trap Order, then it should have

¹⁶ Similarly, if Lavabit believed that the district court mistakenly relied upon the Pen/Trap Order in its August 1 Order, then it should have moved the district court to revise its order. See Segars. v. Atl. Coast Line R.R. Co., 286 F.2d 767, 770 (4th Cir. 1961) (finding that party waived argument that written order did not conform with trial court's actual findings, where party did not move to revise order below).

acted once the district court's August 1 order issued. It did not.

E.

Lavabit tenders other reasons why we should exercise our discretion to hear its Pen/Trap Statute argument, but we find no merit in those arguments. We doubt that Lavabit's listed factors could ever justify de novo review of an argument raised for the first time on appeal in a civil case in this circuit.

Many years ago, this circuit held that, "at a minimum, the requirements of [the plain-error standard] must be satisfied before we may exercise our discretion to correct an error not raised below in a civil case." In re Celotex, 124 F.3d at 631 (emphasis added). It makes no difference then that Lavabit's Pen/Trap Statute argument presents a supposedly "pure question of law" (Reply Br. 6), or that Lavabit was unrepresented during some of the proceedings below, or that Lavabit believes this case to be one of "public concern" (Reply Br. 6).

At the outset, we do not agree that the issue is a "purely legal" one. At the very least, interpreting the Pen/Trap Statute's third-party-assistance provision would require us to consider technological questions of fact that have little to do with "pure law." But even if the question were legal, that would not alone justify our review. Though some circuits will

sometimes put aside the plain-error framework when a case presents this sort of question, see, e.g., Villas at Parkside Partners v. City of Farmers Branch, 726 F.3d 524, 582 n.26 (5th Cir. 2013), our precedents do not embrace that approach. To the contrary, we have taken a more structured view, recognizing that the forfeiture rule "is a salutary rule even where the ground urged for reversal is a pure question of law." Legg's Estate v. Comm'r, 114 F.2d 760, 766 (4th Cir. 1940); accord Richison v. Ernest Grp., Inc., 634 F.3d 1123, 1128-30 (10th Cir. 2011) (rejecting a party's contention that a forfeited but "purely legal" issue could be considered outside the plain-error framework).

Nor does it matter that Lavabit and Levison were unrepresented by counsel during parts of the proceedings below.¹⁷

¹⁷ As a limited liability company, Lavabit likely should not have been permitted to proceed pro se at all. "It has been the law for the better part of two centuries, for example, that a corporation may appear in the federal courts only through licensed counsel. As the courts have recognized, the rationale for that rule applies equally to all artificial entities. Thus, save in a few aberrant cases, the lower courts have uniformly held that 28 U.S.C. § 1654, providing that 'parties may plead and conduct their own cases personally or by counsel,' does not allow corporations, partnerships, or associations to appear in federal court otherwise than through a licensed attorney." Rowland v. Cal. Men's Colony, Unit II Men's Advisory Council, 506 U.S. 194, 202 (1993) (footnote omitted); see also, e.g., United States v. Hagerman, 545 F.3d 579, 581-82 (7th Cir. 2008) (holding that LLCs may not proceed pro se); United States ex rel. Mergent Servs. v. Flaherty, 540 F.3d 89, 92 (2d Cir. 2008) (Continued)

"Although pro se complaints [and arguments] are to be liberally construed, the failure to first present claims to the district court generally forecloses our consideration of these matters on appeal." United States v. Ferguson, 918 F.2d 627, 630 (6th Cir. 1990); cf. Williams v. Ozmint, 716 F.3d 801, 810-11 (4th Cir. 2013) ("We long have recognized that, despite our expansive consideration of the pleadings of pro se litigants, . . . appellate courts should not permit . . . fleeting references to preserve questions on appeal."). Neither this Court nor the Supreme Court has ever "suggested that procedural rules in ordinary civil litigation should be interpreted so as to excuse mistakes by those who proceed without counsel." McNeil v. United States, 508 U.S. 106, 113 (1993). Especially given Lavabit's on-again-off-again relationship with various legal counsel, no reason exists to do so here.¹⁸

Finally, Lavabit proposes that we hear its challenge to the Pen/Trap Order because Lavabit views the case as a matter of "immense public concern." (Reply Br. 6.) Yet there exists a perhaps greater "public interest in bringing litigation to an

(explaining that lay persons cannot represent corporations, partnerships, or limited liability companies).

¹⁸ Litigating this case did not evidently present any particular financial hardship, as Lavabit and Levison have never claimed a lack of funds as a reason for their sometimes-pro-se status.

end after fair opportunity has been afforded to present all issues of law and fact." United States v. Atkinson, 297 U.S. 157, 159 (1936). And exhuming forfeited arguments when they involve matters of "public concern" would present practical difficulties. For one thing, identifying cases of a "public concern" and "non-public concern" -- divorced from any other consideration -- is a tricky task governed by no objective standards. See, e.g., Tony A. Weigand, Raise or Lose: Appellate Discretion and Principled Decision-Making, 17 Suffolk J. Trial & App. Advoc. 179, 280-87 (2012) (describing vagueness and other problems with a "public importance" approach); Barry A. Miller, Sua Sponte Appellate Rulings: When Courts Deprive Litigants of an Opportunity to Be Heard, 39 San Diego L. Rev. 1253, 1306-07 (2002) ("[W]hat is an important public interest to one court will be unimportant to another. The line will be particularly difficult to draw and will often appear nakedly political."). For another thing, if an issue is of public concern, that concern is likely more reason to avoid deciding it from a less-than-fully litigated record. See, e.g., Kingman Park Civic Ass'n v. Williams, 348 F.3d 1033, 1039 (D.C. Cir. 2003) ("The issue presented, however, is of sufficient public importance and complexity to counsel strongly against deciding it in this posture."); Carducci v. Regan, 714 F.2d 171, 177 (D.C. Cir. 1983) (refusing to excuse procedural waiver where case involved

"important questions of far-reaching significance"). Accordingly, we decline to hear Lavabit's new arguments merely because Lavabit believes them to be important.

In sum, Lavabit's assorted reasons to exercise any discretionary review authority do not convince us to review its Pen/Trap Statute arguments de novo. If Lavabit is to succeed on its Pen/Trap Statute claim, it must at least show plain error.

III.

A.

The Pen/Trap Statute requires law enforcement authorities to obtain court orders to install and use pen registers and trap/trace devices. The requirements for these orders are less onerous than the requirements that apply to Government requests for the "content" of communications, as pen/trap devices do not collect "content" but only information associated with the transfer of that content.¹⁹ As to internet communications, pen/trap devices collect only metadata, such as an email's "To:" and "From:" fields, the date and time of transmissions, and user login information. See 18 U.S.C. § 3127(3), (4) (forbidding pen

¹⁹ For example, in the more historically common use of a pen/trap device on a landline telephone, the only information collected would be information such as the telephone numbers of incoming and outgoing calls.

registers and trap/trace devices from collecting "the contents of any communication").

The Pen/Register Statute also includes provisions requiring third parties to provide technical assistance to the Government in connection with those devices. See 18 U.S.C. §§ 3124(a), (b). Under the pen-register provision, for instance, Lavabit must provide:

all information, facilities, and technical assistance necessary to accomplish the installation of the pen register unobtrusively and with a minimum of interference with the services that the person so ordered by the court accords the party with respect to whom the installation and use is to take place.

Id. § 3124(a). Similarly, under the trap/trace provision, Lavabit must furnish:

all additional information, facilities and technical assistance including installation and operation of the device unobtrusively and with a minimum of interference with the services that the person so ordered by the court accords the party with respect to whom the installation and use is to take place, if such installation and assistance is directed by a court order as provided in section 3123(b)(2) of this title.

Id. § 3124(b) (emphasis added).

Thus, Sections 3124(a) and (b) are similar, but not identical. The pen-register provision refers only to information "necessary to accomplish the installation," id. § 3124(a), while the trap/trace provision references information "including installation and operation," id. § 3124(b).

B.

Lavabit now argues that the third-party-assistance provisions found in Sections 3124(a) and (b) do not reach the SSL keys. It reads those provisions to require only enough assistance to attach the pen/trap device to Lavabit's system, not any assistance necessary to make the device operationally effective. Further, Lavabit contends that it needed to offer only enough help to make the installation unobtrusive. And it insists that Congress never could have intended to grant the Government the broad power to ask for encryption keys through the more general language found in the third-party-assistance provisions.

All these new arguments notwithstanding, Lavabit failed to make its most essential argument anywhere in its briefs or at oral argument: it never contended that the district court fundamentally or even plainly erred in relying on the Pen/Trap Statute to compel Lavabit to produce its keys. Yet Lavabit bears the burden of showing, "at a minimum," plain error. Cf. United States v. Carthorne, 726 F.3d 503, 510 (4th Cir. 2013) (noting, in criminal context, that the appealing defendant bears the burden of showing plain error); see also, e.g., Abernathy v. Wandes, 713 F.3d 538, 553 n.12 (10th Cir. 2003) (noting in civil context that the party that failed to preserve his argument bears the burden of showing plain error). And "[a] party's

failure to raise or discuss an issue in his brief is to be deemed an abandonment of that issue." Mayfield v. Nat'l Ass'n for Stock Car Auto Racing, Inc., 674 F.3d 369, 377 (4th Cir. 2012); see also IGEN Int'l, Inc. v. Roche Diagnostics GmbH, 335 F.3d 303, 308 (4th Cir. 2003) ("Failure to present or argue assignments of error in opening appellate briefs constitutes a waiver of those issues."). Taken together, these two principles carry us to one inevitable conclusion: Lavabit's "failure to argue for plain error and its application on appeal . . . surely marks the end of the road for [its] argument for reversal not first presented to the district court." Richison, 634 F.3d at 1131; see also Jackson v. Parker, 627 F.3d 634, 640 (7th Cir. 2010) (rejecting party's plain error argument where, among other things, he "ha[d] not made an attempt -- either in his briefs or at oral argument -- to show that the elements for plain error review ha[d] been satisfied").

Lavabit abandoned any argument that the district court plainly erred, much less fundamentally erred, in relying upon the Pen/Trap Order to find Lavabit in contempt. Moreover, Lavabit fails to identify any potential "denial of fundamental justice" that would justify further review. For the same reason, then, Lavabit has abandoned that argument as well.

C.

We reiterate that our review is circumscribed by the arguments that Lavabit raised below and in this Court. We take this narrow course because an appellate court is not a freestanding open forum for the discussion of esoteric hypothetical questions. See Swann v. Charlotte-Mecklenburg Bd. of Educ., 489 F.2d 966, 967 (4th Cir. 1974) (“[The] Court does not sit to render decisions on abstract legal propositions or advisory opinions.”). Rather, we adjudicate the legal arguments actually raised. See Erilin Co. S.A. v. Johnson, 440 F.3d 648, 654 (4th Cir. 2006) (observing that our “system of justice” is one “in which the parties are obliged to present facts and legal arguments before a neutral and relatively passive decision-maker”). Our conclusion, then, must tie back to the contempt, as the actual order on appeal, and the proceedings below, as the record that constrains us.

IV.

Lavabit also raises several challenges to the seizure warrant, but we need not, should not, and do not reach those arguments. The district court’s orders compelling Lavabit to turn over its encryption keys relied on two, separate independent grounds: the Pen/Trap Order and the seizure warrant. Thus, the court’s later finding of contempt found that Lavabit

violated both the two prior orders. When two independent bases support a district court's contempt order, it is enough for us to find that one of those bases was appropriate. See Consol. Coal Co. v. Local 1702, United Mineworkers of Am., 683 F.2d 827, 831-32 (4th Cir. 1982) (declining to address second of two independent bases for contempt order where first basis was properly affirmed). This contempt-specific rule flows from the more general maxim that, "[t]o obtain reversal of a district court judgment based on multiple, independent grounds, an appellant must convince us that every stated ground for the judgment against him is incorrect." Sapuppo v. Allstate Floridian Ins. Co., 739 F.3d 678, 680 (11th Cir. 2014).

Furthermore, some of Lavabit's additional arguments implicate constitutional concerns. Those concerns provide even more reason to avoid addressing Lavabit's new arguments. "The principle of constitutional avoidance . . . requires the federal courts to avoid rendering constitutional rulings unless absolutely necessary." Norfolk S. Ry. Co. v. City of Alexandria, 608 F.3d 150, 157 (4th Cir. 2010) (citing Ashwander v. Tenn. Valley Auth., 297 U.S. 288, 347 (1936) (Brandeis, J., concurring)); see also Bell Atl. Md., Inc. v. Prince George's Cnty., Md., 212 F.3d 863, 865 (4th Cir. 2000) ("[C]ourts should avoid deciding constitutional questions unless they are essential to the disposition of a case."). So, we "will not

decide a constitutional question, particularly a complicated constitutional question, if another ground adequately disposes of the controversy." Strawser v. Atkins, 290 F.3d 720, 730 (4th Cir. 2002). The long-established constitutional-avoidance rule applies squarely to this case.

V.

In view of Lavabit's waiver of its appellate arguments by failing to raise them in the district court, and its failure to raise the issue of fundamental or plain error review, there is no cognizable basis upon which to challenge the Pen/Trap Order. The district court did not err, then, in finding Lavabit and Levison in contempt once they admittedly violated that order. The judgment of the district court is therefore

AFFIRMED.