Call Them Hippies, But the Grateful Dead Were Tech Pioneers

WHEN THE MUSICIANS once and forever known as the Grateful Dead take the stage in Chicago this weekend to cap a two-city, five-show 50th anniversary run, Deadheads the world over will have myriad ways to join the fun. As with any high-profile event these days, fans can tune in to pay-per-view streams and satellite radio feeds, watch theatrical simulcasts, or attend any number of viewing parties.

What sets the band's "Fare Thee Well" gigs apart isn't that these options are available, but that they exist in large part because of the Grateful Dead itself: The group and its associates pioneered rock concert broadcasts, making it a regular practice starting with a show at the Carousel Ballroom in 1968.

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The Dead, long stereotyped as hippies stuck in the Summer of Love, surely seemed anachronistic by the time it disbanded in 1995 after the death of guitarist and songwriter Jerry Garcia. But the Grateful Dead remains one of the most innovative and tech-savvy bands in pop history. Long before it became necessary (or cool) to do so, the band embraced a DIY ethos in everything from manufacturing its own gear to publishing its own music to fostering a decentralized music distribution system. The Dead's obsession with technology was almost inseparable from the band's psychedelic ambition and artistic independence.

The Grateful Dead poses at Haight-Ashbury in San Francisco, California, circa 1965. Left to right: Bill Kreutzmann, Bob Weir, Ron McKernan, Jerry Garcia, and Phil Lesh. 📷 HULTON ARCHIVE/GETTY IMAGES

There at the back of the stadium floor you'll see the symbol of all things Dead and tech: the tapers all but synonymous with the band. Though they may no longer use tape, these devoted obsessives lug pro-level gear into battlefield conditions to make righteous recordings of the band's jams, to be traded and

conditions to make righteous recordings of the band's jams, to be traded and uploaded, but never sold. Even before the band started officially sanctioning the practice in 1984, the tapers built a worldwide music distribution system that sustained the Dead and helped launch bands like Phish, Widespread Panic, and dozens more. This network (and modern service-oriented variations like NYC Taper) presaged Napster by a generation, survived the radical remaking of the recording industry and laid the foundation for open online file trading. Within hours of this weekend's encores, fans will be able to pull high-res recordings from BitTorrent, a technology whose early adoption was driven primarily by Deadheads and their younger cousins, the Phishheads. NYC Taper has even announced plans to uploadat least the first half of Friday's Chicago show before it is even over.

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More genuinely progressive than most prog rock, the Grateful Dead and its legion of fans embraced a spirit of innovation that could be called entrepreneurial if the pursuit of profit didn't so often seem secondary. Perhaps nowhere is this more evident than in the band's constant experimentation with sound systems and musical equipment. The Dead and its extended family essentially created the sound of modern rock-and-roll concerts, rejecting the small amplifiers and tinny PA systems of the 60s—think of the Beatles at Candlestick Park—in favor of ground-shaking stereo and quadraphonic sound.

It started with the band's first sound system, an Altec Voice of the Theater array adapted to concert halls and Acid Tests by LSD chemist Owsley Stanley. The Dead's commitment to filling big spaces with big sound reached absolutely

outlandish (and expensive) proportions in 1974 with the "Wall of Sound." The massive PA used 92 tube amplifiers to push 26,400 watts through 604 speakers capable of projecting cosmic "Dark Star" jams, whispered Jerry Garcia vocals, and thundering quad bass up to a half-mile from the stage without distortion.

And if the band and its psychedelic contemporaries overshot on occasion– the Wall of Sound was simply too expensive and unwieldy–other experiments blossomed. At the Avalon Ballroom, run by the band's comrades in the Family Dog collective, Bob Cohen designed what arguably was the first monitor system in live music and, to go with it, noise-canceling headphone tech he later sold to NASA. And when the Dead finally did get its sound system in efficient working order in the late '70s, it was by enlisting help of master speaker builder John Meyer, whose work remains the standard and will amplify the band this week. The band's contributions to sound system technology were such that when Garcia died and the group officially disbanded,

ateful Dead (L to R: Bill Kreutzmann, arcia, Bob Weir, Phil Lesh) perform on 1974 at Santa Barbara Stadium, with version of their Wall of Sound.
STEIN/REDFERNS/GETTY IMAGES

Pro Sound News declared, "The Ultimate Experimental Lab Closes."

The histories of the Grateful Dead and contemporary tech are intertwined, growing together out of the Bay Area in the 1960s and '70s. The Dead were friends and contemporaries with innovators within the burgeoning computer industry, from Whole Earth Catalog founder Stewart Brand to members of the

industry, from Whole Earth Catalog founder Stewart Brand to members of the fertile Stanford Artificial Intelligence Lab, whom Dead bassist Phil Lesh consulted during the building of the Wall of Sound. Even now, the Dead's ideologies infuse cyberlibertarian discussions via longtime lyricist John Perry Barlow, who co-founded the Electronic Frontier Foundation, was the first to call the Internet "cyberspace," and recently struck up a friendship and public dialogue with Edward Snowden.

It was Deadheads at the Stanford lab who created the first links in the digital Deadhead network in the early 1970s, soon connecting via ARPANET to their fellow Dead freaks at the M.I.T. Media Lab in Boston, trading setlists and tapes and, in one case, selling pot. It was the first link in a chain that stretches unbroken through the BBS and Usenet eras to modern times. Decades before the site formerly known as Rap Genius, Deadhead librarian David Dodd finished his scholarly annotations of Dead lyrics.

But forget the '60s or anything they may have pioneered. Even now, Deadheads and jam fans remain perhaps the silent majority of the live concert and festival industry. Over the course of decades, the enthusiasm of Deadheads and their jammy ilk has continued unabated, capable of selling out (for example) the inaugural 70,000-person Bonnaroo Festival in 2002 before a single act was announced. Surely anyone thinking of building any new application having to do with live music should think of stress-testing it with Deadheads and their descendants first. If it can't handle the jam fans—still one of the most frothing, cash-ready, and vocally annoyed fanbases around—it's probably not ready for the mainstream marketplace.

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In the digital economy, members of the Grateful Dead and other jam bands possess a resource that, like sporting events, has special value at the exact moment of its creation. Built around an idealistic core of musical improvisation

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and cosmic synchronicity, each show is different. And, for fans, the show is only beginning.

Beyond purchasing archival albums and recordings of concerts that ended just hours before (though ticket-holders often get a free download these days), Deadheads were almost unquestionably the first fanbase to rush to their computer screens to analyze the event after it was over. These days they're right there on Facebook and Twitter and Snapchat of course, but before that they were using mailing lists, back channel chats, and The WELL, the Whole EarthBBS spin-off which is celebrating its 30th anniversary this year. Obsessively networked fans from flash-mobbing Beliebers to PBR-chugging Juggalos are now so common as to be passé, and they're all just following a path blazed by the Dead and the 'heads. When the band seemed under-rehearsed at their Santa Clara unveiling, online chatter exploded. Along with the performing musicians and the good-vibed dancers in the crowd, both the residual onstage confusion and the endless online analysis mark these shows as the authentic Grateful Dead experience.

The jam fans' demand for constant newness has most recently given rise to the virtual cable network known as Couch Tour, the hash-tagged assemblage of live music available for streaming on any given night. The Dead shows will of course be huge events, but the new homebound tradition provides almost nightly programming from shows big and small. Jam bands like Phish and Umphrey's McGee have most successfully monetized the model, but Couch Tour is now so common as to be satirized with the popular Bonnaroo-parodying Homaroo meme. And, of course, the Dead did it first, broadcasting shows on the radio in the 1970s and telecasting shows in the 1980s. Its 1995 New Year's Eve pay-per-view broadcast drew at least a half million viewers, earning a 0.8 Nielsen rating. The pay-per-view model now embraced by opera

companies and pop stars alike may have come along without the Dead, but the Dead proved fans would pay big money for it.

This week's enormous stadium shows will provide plenty of content, though band members already have been filling their own channels all year. In addition to multiple webcasts nearly every week from his Terrapin Crossroads in San Rafael, Phil Lesh performed with modern jazz legend Bill Frisell on OnDemand. And Dead guitarist Bob Weir has made a new model of his own via his Tamalpais Research Institutestreaming start-up, which for some time included a weekly variety show-style webcast.

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Fans, too, continue to contribute with tools like UStream and Mixlr. Last week, fans evaded security guards and used Mixlr to broadcast the band's soundcheck from outside Levi's Stadium south of San Francisco. Perhaps even drones will make their way into Soldier Field alongside more traditional contraband. (If there's one thing Deadheads are good at, it's flouting authority.) Slews of musicians from Radiohead to Prince have experimented with direct-to-fan video pipelines, but none have pursued it with the passion of the Dead, perhaps because few are ready to provide the nearly daily content the infrastructure demands.

Out in the trenches, new technologies are perhaps forming in response to these reunion appearances. Only a few years ago, a crew of jam fans created GroupMe, a group texting app ideal for mass communications at shows and festivals, eventually selling it to Skype for millions. Probably, there will be Deadheads using it to find one another in Chicago and Santa Clara, if they

haven't already adapted to some newer tech. Heads continue to play with new configurations, lately including the Bluetooth-enabled Zoku. Billing itself as "the Secret Society App" to anonymously find "tribes off-the-grid in real life," Zoku works even when the Deadheads inevitably overload the local cell network, as they did during the shows in California. Others are in various stages of development. The secondary ticket market for the Dead shows has been the hugest of the summer, according to StubHub, but the fans also have the Deadhead-friendly face-value ticket site/app CashOrTrade at their disposal to level the playing field a bit.

The street has its own uses for things, as William Gibson so famously put it, but so do Deadheads. Cool hunters and tech world trendsetters surely booked their tickets to the Dead shows months ago.

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