

Open Radio

As disenchantment with today's increasingly outdated economic and political system grows, so more and more people are turning to a proliferating number of free and open movements — in pursuit of alternative ways of doing things. Is Open Radio about to become the next trend?

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At the end of last year I received an email from a US community radio station called [KRUU-FM](#), which is based in [Fairfield, Iowa](#). While surfing the Web [Sundar Raman](#), the host of a show called [Open Views](#), had come across the [interviews](#) I have been doing with leaders of the various free and open movements, and he wanted to talk to me about them on air.



Sundar Raman

Sympathetic to the notion of community radio, and intrigued by the *raison d'être* of Open Views — to explore the open source and free culture movements around the world "stretching beyond the limits of software" — I agreed to do the interview, which was [broadcast](#) in December (and can be heard [here](#)).

It was only after the interview was over, however, that I realised that KRUU is more than just a community radio station: it is also a grassroots initiative with a deep commitment to the principles advocated by the various free and open movements. Or as station manager James Moore more extensively described it during the inaugural Open Views programme, KRUU is "grassroots, community, public, non-profit, open radio."

Moore's use of the term "open radio" caught my attention. What, I wondered, did he mean?

Amongst other things, it seems, he meant that KRUU has made a commitment to use only [Open Source](#) software. As KRUU founder Roland Wells explained on Open Views, all KRUU's PCs run on the [GNU/Linux](#) operating system, and the audio editing tools ([Ardour](#) and [Audacity](#)) used by [DJs](#) at the station are also Open Source. Likewise, the office suite used by Moore to administer the station ([OpenOffice](#)) is Open Source, and the station's web site was built using [Free BSD UNIX](#), and is hosted on the Open Source web server [Apache](#).

By using Open Source solutions rather than proprietary software, Wells told KRUU listeners, the station has saved "tens of thousands of dollars".

A philosophy

But such cost-savings are just a side benefit for KRUU, since its commitment to openness is informed more by a philosophy than a business model.

Above all, this philosophy includes a determination to involve the community in the station as much as possible. And since KRUU broadcasts on a 24-hour round-the-clock basis — and uses only one half-hour of syndicated programming (from [Free Speech Radio News](#)) — this means that Fairfield's 10,000 or so citizens not only get to hear a lot of local content, but they provide it themselves.

As [The Des Moines Register](#) put it a November news report, "In Fairfield, any breathing resident may be stopped on the street and asked to host a radio show."

To date, 150 local residents have volunteered to help run KRUU, and 70 of them now host their own shows. Practically all these [DJs](#), moreover, have no previous experience whatsoever of radio broadcasting.

In other words, in true Open Source fashion, KRUU has spurned a top-down model in favour of a bottom-up, do-it-yourself approach. And where traditional radio stations aspire to little more than pumping out an endless flow of anodyne, mass-produced programming, KRUU invites local citizens to select the kind of programming they want, and then produce it themselves.

"One of the reasons why we want to do this," [explained](#) Wells at the station's launch last September "is because most of the media we see or listen to these days is created somewhere else."

And the end result, Moore [wrote](#) recently in [The Iowa Source](#) is "an aural mosaic" that is a "far cry from the corporatised amalgamation so prevalent in so much of syndicated radio nowadays."

This aural mosaic includes a wide range of different musical genres (including TV theme songs) local news, and political debate — one of the first "[Speaking Freely](#)" shows featured former US Republican Congressman [Jim Leach](#), who described the Iraq war as "the greatest foreign policy blunder in the history of our country".

There is also a rich mixture of minority programming — including "[Magyar Mix](#)" (Hungarian music selected and played by Hungarian-born Fairfield resident Laszlo Papp), a Spanish-speaking show, a [drum show](#), and "[Sleepy Time with Grandpa D](#)", an evening spot for kids that features soft music and bedtime stories.



Laszlo Papp

As a volunteer effort KRUU has an authenticity that no slick for-profit radio station could hope to match. True, there are frequent glitches, dropped lines, and miscues. And since KRUU is located next to the railroad, the occasional clanging of passing trains provides an intermittent but atmospheric backdrop.

However, listeners are unfazed by these rough edges, says Raman. "Every DJ (myself included), regardless of their show, is accosted on the street regularly and told that the station is the best thing to have happened to the community."

"It's the realness that people are responding to," Moore suggested to *The Des Moines Register*.

Open Source Music

But KRUU'S commitment to openness does not end there. It is also reflected in the type of content broadcast: one show, for instance, is called [Open Source Music](#). This only plays music that has been licensed under the [Creative Commons](#) — a new style licensing scheme that encourages people to freely distribute, build upon, and share creative works like music, text, and video.

As such, Creative Commons licences are very different to traditional copyright, which locks down creative expression for the life of the creator *plus* 70 years, and generally means that radio stations have to pay hefty licensing fees to broadcast music.

As Raman concedes, however, Creative Commons music is not strictly speaking open source. That, he says, would require that "all 'source' (be it tablature, midi files, source track material, or the sequence of how the music was created) was made available with the music."

This, however, is what KRUU expects to provide in the long-term, "since our goal is to have full media creation and distribution facilities." There are also plans to create a recording studio for live shows with local bands.

The model Raman has in mind is something like [ccMixer](#), a web-based service where people can listen to, sample, [mash-up](#), or interact with music in whatever way they wish.

Adds Raman, "ccMixer is a good start, but what's really necessary is a way to 'compile' music from 'source'. This is basically the wall our internal discussions have hit."

For the moment, he says, the Creative Commons music that sites like Magnatune.com and Jamendo.com use "is all that's 'open source' today." (Magnatune actually uses the term "[Open Music](#)").



The Source

Once again, KRUU's interest in playing Creative Commons music is not about cost-savings, but reflects its commitment to [free culture](#) — a social movement that has its roots in the [Free](#) and Open Source software movements.

As Moore put it in the *Iowa Source*, "We are adding to the cultural commons by using the products of the intellectual and software commons, and by deriving from the musical and artistic commons."

Public commons

And conscious that the proliferating number of open and free movements are finding common cause with the environmental movement, KRUU is also keen to support the growing interest in [permaculture](#) — a horticultural design system that aims to create [sustainable](#) human [habitats](#) by following nature's patterns.

To this end KRUU has co-opted sustainable living activist Lonnie Gamble to host his own show, which is called [Abundant Planet](#). Gamble runs the Fairfield-based solar and wind-powered sustainable living community [Abundance Ecovillage](#).

In addition, there are plans to create a public permaculture-designed garden around the radio station. The aim, explains Moore, is to provide "a public commons with fruit and things that people can come and enjoy."

KRUU's garden will perhaps also provide a useful role model for Fairfield citizens. "One of the things that started the Permaculture Movement is the extremely environmentally unfriendly landscaping norm in the US," says Raman, "where most pesticide and herbicide use is for residential lawn cover."

By contrast, he adds, permaculture aims to make all ornamental landscaping "functional". Essentially, this means "that trees, shrubs, creepers, and groundcover are

all edible or directly functional in terms of pest reduction, heat dissipation, and water purification."

What, I wondered, is the connection between the environmental movement and the free and open source movements?

"We see the environmental movement as the real motivation for Open Source to be adopted everywhere, as an ideology," replies Raman. "[Co-op farming](#), collaborative [seed banking](#), and community-based environmental protection are all Open Source ideas."

Wider social movement

While some might question Raman's claim, there is little doubt that the KRUU "project" has been deeply influenced by the various free and open movements. Indeed, it seems that there is now a broad social movement gathering pace, in which more and more people, in many different walks of life, are seeking to apply the Open Source philosophy to what they do. However, this larger movement has yet to be fully articulated, or adequately explained. Nor is there yet a widely agreed umbrella name for it.

What is uncontroversial is that the ideas behind the various free and open movements are proving both compelling and contagious — suggesting that we all hanker after the sense of community that they create, we all have a natural inclination to share and collaborate in the way that they espouse, and many of us feel uncomfortable about the profligacy of the current economic system. And it is these same instincts that appear to motivate many environmental activists.

Amongst those seeking to map out and define this wider movement are critics like Yochai Benkler (author of [The Wealth of Networks](#)), [Michel Bauwens](#) (creator of the [P2P Foundation](#)), David Bollier (who runs the [On The Commons](#) blog), and Peter Barnes (author of [Capitalism 3.0](#)).

In explaining the parallels with the environmental movement, Bauwens [has pointed out](#) that, unlike natural resources, we can share ideas and information with others without depriving ourselves of their enjoyment. Consequently, he says, in a digital economy — where sharing and copying is both easy and natural — treating knowledge and information as "property" tends to stifle innovation, not foster it. With natural resources, however, the situation is reversed.

As a result, he argues, we have created an upside down world. "Currently we live in a society that treats scarce and [rival](#) resources (i.e. nature and the biosphere), as if they were infinite, and artificially renders scarce what is infinite, since it can be reproduced for free. This is an illogical state of affairs that both destroys the biosphere and impedes the growth of social productivity."

Barnes argues that the fundamental problem is that our economic system is now out of date. "Although capitalism started as a brilliant solution, it has become the central problem of our day. It was right for its time, but times have changed."

As things stand, he says, "the commons — an unorganised mélange of nature, community, and culture — is the constant loser."

As a consequence, capitalism now not only threatens to destroy the planet by plundering its natural resources, but it is stifling innovation and creativity, by clinging to an out-dated intellectual property system; a system that is destroying the [public domain](#), and social productivity in the process.

Barnes insists, however, that this does not mean that capitalism should be abandoned. We just need to modify it. Or as he puts it, we need to "upgrade our [economic] operating system" — from Capitalism 2.0 to Capitalism 3.0.

The key difference between versions 2.0 and 3.0 of capitalism, he explains, "is the inclusion in the latter of a set of institutions I call the *commons sector*" which will "feed and constrain" the corporate-dominated private sector.

How we make this transition, however, is the weak link in Barnes' argument — for experience shows that the current political system is as outdated and sclerotic as our economic system, and politicians are highly unlikely to take the necessary action, particularly in light of the significant, and undemocratic, power that [special interests](#) wield today.

In the meantime, however, increasing public frustration with the wastefulness of capitalism, and the unwillingness — or inability — of politicians to act, is encouraging more and more people to seek alternative ways of organising their lives, and their communities — be it by adopting Open Source software, embracing Creative Commons, or indeed launching grassroots initiatives like KRUU.

Paying the bills

Ideals, of course, are great. But even with an army of volunteers to hand initiatives like KRUU still have bills to pay. How will the station fund itself?

Right now, says Raman, the station remains in an "experimental start-up stage." One model currently being explored, he adds, is that of sponsored content. "Basically this works out to be 30 second descriptive spots about the sponsor/underwriter, and for all practical purposes it's an ad."

And since listener support is the norm for funding community radio in the US, this too is being tried. "While we're not big fans of it, it is our main approach right now, since it's well known," says Raman.

How would this work? Writing in *The Iowa Source*, Moore wondered whether appreciative listeners might not "consider contributing the cost of one meal a month to the station — \$5, \$10, or \$15, depending upon one's budget and appetite." To that end the station has inserted a [PayPal](#) "Quick support" button on its web site to encourage contributions.

But as listener support requires "begging" the community to give on a regular basis, Raman suspects it may not prove a satisfactory long-term solution for KRUU. "What

we'd rather do is make the radio station a community resource that people want to pay for, because they recognise its value."

KRUU is therefore again looking to the Open Source Movement for inspiration. "We feel that the radio is basically an enabler — much like Open Source operating systems," explains Raman. "This foundation can be used for other 'tangible' benefits that people want to pay for. To this end we're working on conferences and educational opportunities for both corporate and private interests. And we're putting on regular events such as socials and dances."

In other words, Raman sees KRUU playing a similar role to the GNU/Linux operating system, which is developed by volunteers, and then made freely available to anyone who wants it. And in the way that the Open Source community then makes money by providing paid-for support and value-added services around the open platform of GNU/Linux, Raman believes that KRUU should seek to earn revenue not from the station itself, but from services and products associated with it.

The good news is that KRUU has already shown that it can attract money in indirect ways, and help the local community in the process: In October, Fairfield was [designated](#) one of Iowa's [Great Places](#). And when the announcement was made KRUU was singled out for mention, on the grounds that it demonstrated the "entrepreneurial vitality of the community was real and viable."

Importantly, Great Places designation means that Fairfield will share \$3 million with five other communities in Iowa. In a just world, of course, some of that money would find its way to KRUU!

Whose community?

But perhaps the most intriguing aspect of the KRUU phenomenon is that although the Federal Communications Commission ([FCC](#)) has licensed it to provide a low-powered FM service — giving it a theoretical reach of just 12 miles — by adding a web-streaming server KRUU is also able to broadcast to the entire world over the Internet. And after less than four months of broadcasting, the station has already attracted listeners from 40 different countries.

But does this not raise difficult conflict-of-interest issues when planning programming?

No, says Raman. "Fairfield is a somewhat unique community, in that it is home to a pretty eclectic group of people. For instance, the Transcendental Meditation organisation [[Maharishi University of Management](#)], which has a large international following, has its base here. And many of the DJs have a connection (either directly or through friends) to the group. This makes our audience incredibly diverse."

In addition, he adds, many of the DJs' families and friends formerly resided in other countries, and some of the DJs are well-known local speakers, or have a connection to the international community.

For these reasons, says Raman, "the challenge is not about local versus international, but more how to keep our programming interesting for an already international (and highly critical) local population. The listeners on the Internet are basically just gravy."



The KRUU

Gravy or not, KRUU's international listeners surely offer huge potential, not least because they could significantly enhance its ability to raise funds.

Certainly they raise interesting questions about the nature of communities in the networked world: how we juggle membership of different physical and virtual communities, how we define those communities, and who we allow to join and contribute to them.

After all, in order to host a show on KRUU it is not — in theory — necessary to be resident in Fairfield, or indeed in the US: A DJ could create his show offline anywhere in the world, load it on to the station's network server, and then have someone physically located at the station broadcast it at the scheduled time.

In short, if the audience of a community radio station is spread across 40 different countries how do you define that community, and whose community is it?

A phrase from the environmental movement comes to mind: [Think globally, act locally.](#)

The revolution is right here

Without doubt, then, KRUU is a fascinating experiment. For Moore, it is essentially an "exercise in democracy"; an exercise, moreover, based on the principle that communities don't always need to rely on others (least of all national politicians), but can as often as not arrive at their own solutions, and meet their own needs.

Writing in *The Iowa Source* Moore comments, "It's amazing what a shared vision and a dedicated core of volunteer activists can accomplish. I realised that this is where the revolution is for me — not dissecting, correcting, or second-guessing political leaders, expecting them to somehow make our lives better. No, the revolution is right here, right now — it's how we treat each other, how we listen, dialogue, deal with differences, come up with viable solutions in our own neighbourhoods, give voice to our own community."

But is KRUU a one-off initiative or could it be the start of a new "Open Radio" movement. Time will tell, but clearly one swallow does not make a summer: when doing some pre-launch research on community radio, Moore found only one other station in North America doing anything similar. Most community radio stations, it seems, prefer to stick to traditional models. And KRUU has yet to demonstrate its long-term viability.

But the greatest obstacle to a flowering of Open Radio is the way in which the current licensing system treats spectrum as a finite resource, with government agencies like the FCC imposing strict limits on who can broadcast over the air. And these agencies are not generally fans of community radio.

Interestingly, some believe that today's technology obviates the need to license spectrum. [Open Spectrum](#) advocates, for instance, point out that by using technologies like [software-defined radio](#), [cognitive radio](#), and [mesh networks](#), it is now possible to share the airwaves in the same way that we share bandwidth over the Internet.

As the Open Spectrum FAQ [puts it](#), an Open Spectrum policy "would permit anyone to send signals across any range of spectrum without permission, with the minimum set of rules required to enable the success of a 'wireless commons'."

This, they say, means that it is within our powers to "turn a federally-managed permissions system into an open market for ideas and creativity."

If this is correct then the current system for licensing spectrum is as anachronistic as the intellectual property system, since both continue to treat infinite resources (ideas, creative expression, the spectrum) as if they were finite. For the moment, however, the powers that be remain unconvinced that there is any need to upset the *status quo*.

This suggests that we would need to see this larger debate play out before an Open Radio Movement could truly flourish. The good citizens of Fairfield, however, have no need to wait: thanks to the efforts of Roland Wells — who, against all odds, managed to obtain a licence for KRUU — for them the revolution has already begun!

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