

# How to Kill Packet-Radio & APRS? Come to Serbia! (Part 4)

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## **Abstract**

*In this paper, I continue describing various amateur radio leaderships' wrongdoings that create obstacles for any development of VHF/UHF/HF ham radio data infrastructure, and also lead to possible extinction of anything else in Serbian amateur radio but telegraphy and contests.*

## **1. Introduction**

During my short one-year episode in the local ham club's secretary position (March 2019 – March 2020), I expected to have much more opportunities for establishing more-or-less continual work of a then planned bulletin board system (BBS), based on VHF packet radio, than I tried to achieve in the nearby Amateur Radio Union of Vojvodina (Savez radio-amatera Vojvodine, abbr. SRV) where I also served as the secretary (Skoric, 2020). This year again, I almost decided not to write about my efforts to avoid visible ignorance for amateur radio *data* modes, but I changed my mind because several things changed (from bad to worse) since my previous installment in this topic. As I always do, I want to remind you that my first paper for DCC conferences was published in the proceedings of the "22nd Annual ARRL and TAPR Digital Communications Conference" (Skoric, 2003). Several years after that, I announced: "I ceased any connection with governing people in Serbian ham organizations for good." (Skoric, 2018). However, "... Almost twenty years later I came back ... to serve as the Union's secretary." (Skoric, 2019).

Even though I quickly realized that mentality in the people I had rejoined after a long pause, did not get 'modernized' much (if any) during the decades of my absence, I kept optimistic that at least I would be successful in reviving packet-radio, pactor, and related BBS/RMS operations. The reason for my optimism was in a fact that both the club and the union were eager for any kind of prestige when it comes to compare themselves with their counterparts within the country and abroad. That is why I offered the club my service in a collaborative work with the teachers at the school in Sremska Mitrovica city (Serbia) to write a paper on the ARISS radio contact the club had provided in January 2020.

As I informed you last time, my offer was ignored without any explanation, and I could only say that it was a result of common misunderstanding among Serbian hams on what technical & research papers are all about. So I decided to return back to my project of a new BBS in SRV.

## 2. The BBS

### 2.1 First (successful) phase

As the Union's secretary, I actively participated in many administrative activities, such as preparing documents for annual meetings – SRV 'assemblies', sending letters to the governmental authority RATEL, dispatching QSL cards, diplomas, etc. That voluntary tasks required me to visit the Union's office at least 2-3 times per week. Of course, after getting retired from any professional job, visiting the office was not a problem and I was happy to assist fellow amateurs to accomplish paperwork, get their cards, and so on. In the same time, I initiated re-establishing the packet-radio email server, which we already had in the Union somewhere until the mid-nineties. So, I brought one of my personal home computers that already had a Linux version of FBB packet-radio software installed, but which did not run 24/7 in my apartment. The plan was to use the Union's unlimited broadband access for BBS-to-BBS mail forwarding, and a VHF radio for immediate metropolitan area coverage. See Figure 1 for that machine.



Figure 1. Linux-based PC-compatible computer with FBB packet-radio software.

After placing the computer alongside the QSL-card repository, I removed unnecessary parts of the operating system (such as graphical user interface), then upgraded FBB to the newest version, and tested email exchange over the Internet. All worked well, so I was repeating all the tests, including housekeeping, whenever I came to the office for other tasks. In parallel, I received a TNC as a gift from a friendly US ham (Figure 2).



Figure 2. Pac-Comm terminal node controller planned for the BBS operation.

## 2.2 Second (unsuccessful) phase

The vice-president YU7AC promised me to donate a ground-plane antenna. He promised so in the early 2019 when I initiated the BBS project, much before I brought in the computer. As I felt optimistic at that time, regarding the cooperativeness in the president and vice-presidents, and did not find as proper to remind him on his promise, I stayed calm. But he never brought the antenna. In the same time (February/March 2019) the Union's VHF radio was brought to a technical service to be repaired for proper operation. I was previously told by the other vice-president, YU7CM, that the radio had been working relatively well for a while until it would have started to drift from the dial frequency, or like. So a fix needed to be done. Interestingly, the radio was not stored in the Union's office, but rather at the YU7CM home where it was obviously used for his personal hamming. In any case, the 'reparation' took more than two years when (early 2021) I was informed that the 'serviceman' have not (yet) fixed the radio. Actually, it seemed that the 'serviceman' (a ham from Backa Palanka city, named Zelko, pron. Zhelyko, unknown callsign) tend to pick up electronic parts from one radio brought to his 'service' for maintenance, to fix another radio, and later the same for a third radio, etc. What a 'honest serviceman ham'!

In October 2020, the Union's president, YT7DQ, and vice-presidents decided to hold a 'working luncheon' with few of us who were volunteering with SRV. I took that opportunity to remind them on the BBS project. After a while, the president commented that he did not want any radio transmission to be performed from the Union's office. He expressed his opinion without any further explanation, even though I made it clear that the proposed BBS project would remain as the main motivation for me to perform my secretary 'duties'. Furthermore, he and vice-presidents asked me to continue the project in the radio shack of the nearby Radio club "Novi Sad" (YU7BPQ).

It became clear to me that I was wasting my time with people who did not appreciate my efforts to revive digital/data communications in the province (and the country as well). It became clear that they wanted to expel the 'unborn' BBS from the office. Day by day, my computer became less and less visible there ... until I had to move it to the club (Fig. 3-5).



Figure 3-5. At first it was in foreground. Then it started to disappear from the scene.



### 2.3 Third (failed) phase

In March 2021, I wrote my resignation to the Union's board. In just few hours later, they returned some courtesy words regarding my two-year voluntary work, following by immediately announcing a newly-appointed secretary. Obviously they did not cry about my departure.

So I completely turned to the activities in the club's radio section. Among the other, I used my own laptop computer and pactor modem, a pair of sound-card packet-radio interfaces intended for both HF and VHF transmissions (where HF packet-radio and pactor would use the same HF radio and antenna), few GPS receivers for APRS operation, and so on. Among them were SCS P4Dragon DR-7400 for pactor 1-4 & 'robust packet', RIGblaster Advantage & RIGblaster Plug'n'play, YIC G-mouse receivers, etc. (Figure 6).

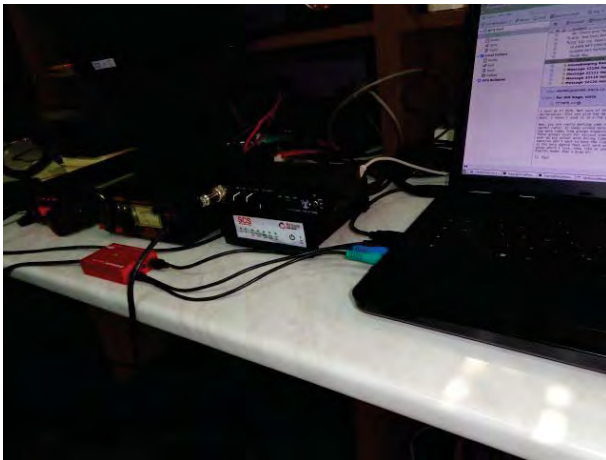


Figure 6. Pactor modem in simulated portable operation alongside with a sound-card interface.

Even though I made relatively good results in so irregular *data* activities because I visited the club shack only twice a week (mostly on Tuesdays & Thursdays afternoons when there were no other club members -important in than

actual pandemic crisis), I did not notice much support from the club leadership. Frankly speaking, the club 'policymakers' have introduced their long-term opinion where only contests are supported (and mainly those of CW) while other activities are not seriously considered. So even though I knew very well that email BBS services and Winlink RMS participation shall be performed 24/7, I had to rely on availability of the club's HF radios and antennas. (Due to several factors, I am not in a position to run HF from my home apartment.)

As expected in a club environment, more obstacles started to occur, such as announcing a contest this weekend on a short notice, so the main radios (FT-1000MP Mark V, FT-1000MP Field) would suddenly go to be prepared for the contest. So I could not work at all, or had to use a portable replacement radio (FT-857). In the latter case, I managed to attach the pactor TNC to the backside jacks, and the sound-card interface to the front-side ones (Figure 7).



Figure 7. Two cables on the backside (pactor), and two cables on the front (packet).

As we know, one trouble never comes alone. For example, even though I took care of the radios mentioned (such as running data modes at 20-25W output max), the leadership tend to say that any failure would be my 'fault' because digital operations are "dangerous" for radios. So

at the time of writing this (late July 2021) I almost stopped operating from the club shack, in waiting for some things to clarify. In that direction, I posted an inquiry to some mailing lists, including packet-radio net, in order to investigate whether any real ‘danger’ in data modes can really jeopardize the vitality of an HF radio. Up to now, it seems that it might be some risks in older devices equipped with mechanical parts (relays) for frequent RX/TX switching. That’s the case with older FT-857s.

In opposite to that, even though the club’s FT-1000s feature more “safer” PIN-diodes, I learned that those radios have been adapted in the club for slower switching, to favor a whole telegraphy character to be sent during a single TX instance. So, it seems no luck there either.

I am in the process of preparing for an international scientific conference in Greece where I planned to make a demo and promote APRS, HF packet, and pactor operations. With a little help of a friendly Greek ham, I booked a room in a hotel where it would be possible to install a temporary antenna. Even though I initially planned to bring few handy VHF radios, GPS receivers, and other equipment to make local tests on 144.800 MHz (the common APRS frequency across IARU Region 1), I thought it would be wise to take this travel opportunity and test APRS on 20m band, so to make comparison with experiments I had made in Serbia. Furthermore, some occasional tests in pactor forwarding with my EU partners could be a value-added provision for conference audience. However, it is still unknown whether the club’s executive board will approve my request to borrow FT-857 for that ‘DXpedition’. In any case, the application for special callsign prefixes has been administered on time.

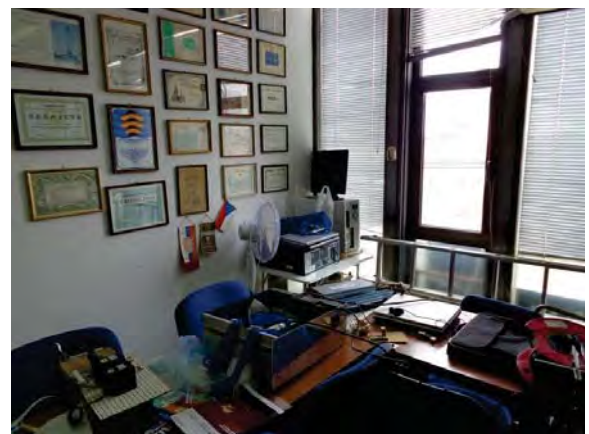
So, let us see what happened with the BBS computer that I relocated from the Union’s office to the nearby ham club room. Figure 8 shows the so-called ‘schoolroom’ of the club where ham radio courses were practiced several

years ago. Since recently the ‘school tables’ became filled in with hardware tools & instruments, raw materials, and other things that should have better be placed in the storage space, instead of the teaching areas.



**Figure 8. Awards in Radio club “Novi Sad”, Serbia (just one of the several walls covered by diplomas).**

RC “Novi Sad” - YU7BPQ is very proud on its 90+ years of history. The number of diplomas that you can see on the wall is just a small percentage of the vast pool of awards that were taken in the past. (The opposite wall ‘mirrors’ the one in Fig. 8, as well the wall behind the photographer. Besides this room, there is the radio station shack, the president’s office, and few storage rooms.) You can see a black square item near the window in Fig. 8. Let’s zoom it ...



**Figure 9. The room corner with various equipment surrounded by other materials, tools, etc.**

It is the LCD monitor that stands on top of the ‘unhappy’ BBS computer. More about in Fig. 10.



**Figure 10.** The BBS computer (white tower) awaits for its purpose on July 2021.

Why is it cornered there? Well, when I brought it to the club I was told by the president (YU7WW) that “... 24/7 BBS operation in the club is likely to ignite fire ... destroy the club”. It did not help that the computer had two fans (a one to bring air in, the other to take it out), and that the machine won’t operate 24/7 until fully checked for both hardware & software integrity.

By the way, the club has already had an *Echolink* computer installed, which works non-stop (including its radio and related accessories attached), but that one combo was never considered as a ‘fire initiator to be’. Not to mention that Echolink facility was used by only one or maybe two hams in the wider city area.

### 3. Conclusion

At the very end of this year’s installment on the actual state and perspectives of ham radio data modes in Serbia, I can tell that there is not much light to be seen at the end of a tunnel. As long as the majority of club members consider CW and SSB contests as their primary modes of operation, there will be not enough room for fresh initiatives. When it comes to my initiative for reviving packet-radio BBS & node network, it shall be noted that such devices and equipment were in operation many years ago, on mutual behalf of local packeteers. Even nowadays I meet young people in their twenties or thirties who are either students in computer sciences or programmers by profession. Some of them occasionally visit our club (although probably not fully intentionally, but rather incidentally because a popular restaurant-cafe shares the same floor in the building).

Such occasional visitors I see as prospective data mode supporters. At this stage I have been preparing a slideshow for them, that intends to invite more ‘fresh blood’ into the area of ham email exchange. Times in front of us will show if things will improve. Until then ...

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## 5. Appendix

On January 4, 2021, I sent an email to the club president (YU7WW) and two other executive board members (YU7BG, YT2CQ) where I attached some screenshots depicting what I had achieved in the club station. Besides that, I enclosed a project of some further development:

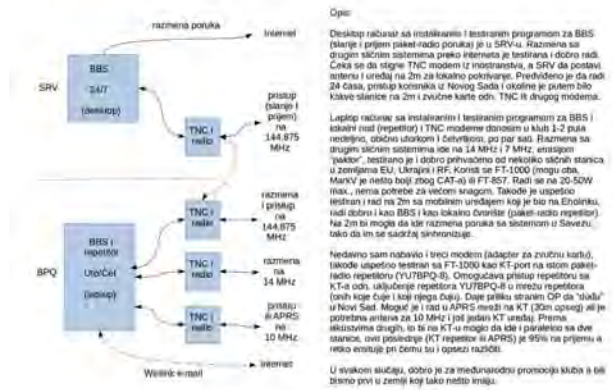


Figure 11. The provisional project for deployment and development of data networking.

Let me tell you what it was about. Figure 11 includes a block diagram and description in Serbian language. The upper left part of the above-mentioned scheme is shown in Figure 12.

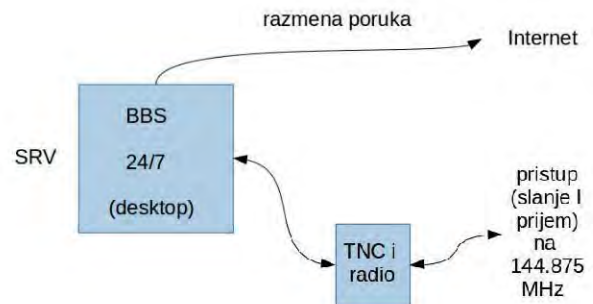


Figure 12. The provisional project for deployment and development of data networking.

The ‘blue BBS box’ (labeled “SRV”) was the planned email server, intended to operate 24/7 at the Union’s office. It was supposed to run two ports: A telnet port for email exchange via the Internet, and another port for user access on 144.875 MHz via TNC and VHF radio.

Figure 13 shows the second segment of the planned infrastructure (from the lower left part of the scheme given in Figure 11). The ‘blue BBS/Repeater box’ (labeled “BPQ”) was my portable email server that operated on Tuesdays & Thursdays at the club shack. It already had three radio ports (from top to bottom): VHF

user access & forwarding on 144.875 MHz; HF pactor & ‘robust packet’ forwarding on 20m band; and user access & APRS beacons on 30m band (when appropriate antenna becomes available, until then it is a 300bd packet-radio port sharing the same radio with the 20m port).

Furthermore, if and when the laptop is connected to the Internet, it would add a RMS facility for handling Winlink emails.

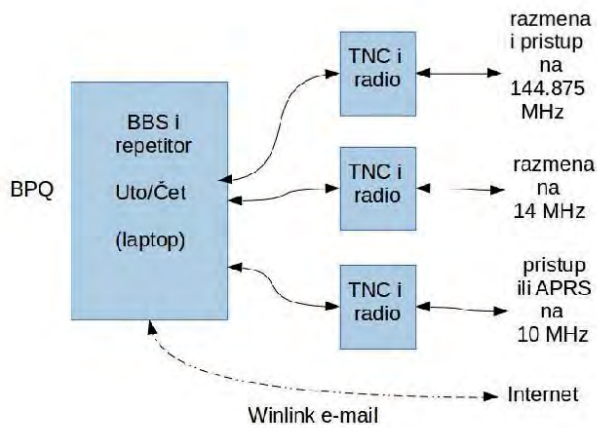


Figure 13. The provisional project for deployment and development of data networking.

At the time when the initial project draft was completed (January 2021), it seemed that email exchange and user access load would be well-balanced: The local users could access their mails mainly by the “SRV” BBS that was supposed to run 24/7. Having in mind that the working hours of the Union’s office were just 3 hours per day (Monday, Wednesday, and Friday), and the cost of unlimited broadband spread across 24/7, it was clear that the BBS activity would be cost-effective for SRV.

On the other side, my activities in the club station were also circa 3 hours per day (Tuesday and Thursday), so that activity would be kept continual every week and hence coordinated with HF partnering systems. In the same time, the club’s digital activity would be well ‘advertised’ when it comes to its global visibility on data bands, and particularly when it comes to the APRS positioning. Not to mention potentials for further participation in ‘emcom’ systems, like Winlink.

Unfortunately, the project is now stalled and put offline due to the ignorance in those who make decisions on what ‘Serbian ham radio is about’.