Keeping the Spectrum alive: Platform fandom in a time of transition

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Computer and video game cultures seem to have a paradoxical relationship to temporality. On the one hand, they are obsessed with the future. Game advertising keeps selling "revolutions" to boost sales of the upcoming generation of hardware and journalists are anxiously awaiting every next big thing (Dovey and Kennedy, 2006; Newman, 2012). On the other hand, players and designers alike are nostalgic for the past. They long for the bygone (or imagined) times of simpler, purer games and repurpose antiquated visuals of early games into "retro" aesthetics (Garda, 2014).

Digital games scholarship has already documented both of these extremes. But not all games hardware and software can be labeled as either novel or retro. More of it is likely to be moderately new, or just about to become outdated. That is why I want to look at what is happening in computer game communities midway *between* these two points. I will focus my attention on a platform which is neither cutting edge nor retro: an aging machine which is being replaced by the next, more powerful ones, but still kept alive in a highly specific local context.

This chapter will reflect on an example from early 1990s Czechoslovakia, where an active community of *Sinclair ZX Spectrum* users survived despite the invasion of 16-bit computers. I will draw from *ZX Magazine*, the only Czechoslovak periodical dedicated exclusively to the Spectrum platform, in order to examine the experiences and discursive strategies of users who stuck with their old hardware despite its seemingly imminent fall into obsolescence. Analysis of this material will help us understand how digital game fans have lived through, experienced and discussed the history of computing and digital games, and digital game platforms in particular. A closer look at a community around an aging platform may complicate some of the current takes on digital game obsolescence and the role fans play in it.

This chapter builds on a qualitative analysis of the 1990–1994 issues of *ZX Magazine*. In the 26 issues[1] of the magazine published during these five years, I identified articles that explicitly commented on the platform, and excerpted the comments.[2] Using thematic analysis, I have identified three categories of user strategies to keep the platform alive: *treasuring* the history of the Spectrum, *squeezing* the most out of the platform by utilizing programming know-how and coding tricks, and *extending* the platform by connecting it to various peripherals and enabling it to communicate with newer computers. After laying out the theoretical and factual background of the research, I will discuss these three categories. Afterwards, I will focus on the moment of parting with the platform and the community.

Resisting obsolescence

Over the years, we have become accustomed to the fact that machines that we play on become old and outdated. Sustained sales of computer and video game hardware are predicated on the continuous process of technologically and socially produced obsolescence. As Sterne has noted in his essay on hardware trash, "the computer industry has applied the logic of planned

obsolescence to media hardware more thoroughly than any other media industry before it."
(Sterne, 2007, p. 22) After several years, a computer that was once *new* becomes merely
useful, then *obsolete*, and finally *trash* – or in Swalwell's words, *detritus* (Swalwell, 2007).
Manufacturers phase out their support, new software stops being compatible. Although
physical deterioration plays its part in this process, more often than not the hardware is still
functional or repairable. The machines "are only partially used and discarded when a new
version, model, or upgrade becomes available on the market."(Parks, 2007, p. 35) This logic
of supersession is reflected in linear historical narratives of games, punctuated by the
moments at which the new generation "replaces" the previous one (Newman, 2012).

Critical explorations of hardware obsolescence tend to see it as a process that cannot be
inhibited or reversed; it is viewed as absolute. Slade attributes it to the power of advertising,
which creates dissatisfaction with the old and a desire for the new. "When dissatisfaction and
desire reach a peak, we acquire the new and discard the old." (Slade, 2007, p. 265) In other
words: "Invariably, after you buy the newest electronic widget, you dump the old one" (Slade,
2007, p. 268). Sterne mentions the coercive nature of hardware obsolescence – sooner or later,
if people want to keep up, they have to switch. However, he does admit that "some users will
persist for years with an old machine until they are forced to update or upgrade." (Sterne,
2007, p. 24)

Let us look more closely at these pockets of persistence. Some users will run the old and the
new machines concurrently. Others will refuse to "dump" the old machine, because they have
sentimental attachment to it – or because they see it as still having future utility. There will be
even more people who simply cannot afford to switch to a more powerful computer. As
Murdock et al. have found in their 1987 survey of ICT use in the British Midlands, 70% of
users were still clinging on to the already obsolete tape technology as their software and data
storage medium (Murdock et al., 1994).

Obsolescence therefore does not strike at once – it is anticipated and mediated by marketers, journalists and user communities. Individual users experience it as a transition rather than a switch, and such a transition can be a complex process on both individual and social levels, involving the questions of community, technicity, and nostalgia. Transitions unfold at different paces in different contexts, and lifespans of hardware "generations" can significantly overlap. By focusing on these transitions, digital game historians can free themselves from the shackles of the linear narrative dictated by hardware manufacturers, and tap into the discussions and meanings of "generations" and "platforms" as they emerged in particular historical situations.

People around platforms

Like film, TV series or comics, computer and video games attract followings. A person can identify as a fan of a particular game (Consalvo, 2003), or as a fan of video games in general – the latter would sometimes call themselves a "gamer" (see Shaw, 2010). Both of these avenues of fandom align with well-established categories of media consumers – fans of a particular media product, or fans of a particular medium, such as "movie buffs" or "opera enthusiasts." (Jenkins, 1992) Additionally, people can identify as followers of video game companies. The term "Nintendo fanboy," for instance, enjoys a common currency in gaming media. Nintendo fanboys are seen as unconditional supporters of the brand, fans of the games produced for its machines, and obsessive collectors of Nintendo consoles, games and memorabilia (Fahey, 2011). The reasons why these fan communities emerge can be both symbolic and practical. Nintendo fans may form communities in order to share their experiences of playing Nintendo titles or engage in nostalgic ruminations on Nintendo's history. At the same time, users of a particular machine may bond in order to trade games and

know-how, including both walkthroughs, and – in cases of home computers – the ways of modding or programming one's own games.

In the early history of home computing, user communities were crucial to the development of computer literacy and computer game industries (Haddon and Gray, 1994; Saarikoski and Suominen, 2009). Computer owners were often hobbyists, who purchased their machines not only to run commercial programs, but also to experiment and create their own software (Swalwell, 2012). In order to share their know-how and trade software, they formed clubs and communities. The boundaries between these communities often reflected the technological architectures of available computers.[3] Early 8-bit computer models like the Apple II, TRS-80, or the slightly newer Commodore 64 and Sinclair ZX Spectrum were mutually incompatible and their modest hardware did not allow for a common operating system to be installed. Games, especially, tended not to be written in higher-level programming languages that could be adapted to different types of computers, but rather in machine code – that directly accessed the computer's hardware and was therefore far from portable. Much of the programming and user know-how was therefore closely tied to the specific line of machines, or *platform*.

We can understand a hardware platform as "an abstraction, a particular standard or specification before any particular implementation of it." (Montfort and Bogost, 2009) Each platform, however, may have numerous material implementations. Usually, all "versions" or "models" of a platform are compatible in terms of the software they can run and are based on similar components. When speaking about the Spectrum platform, Czech journalists of the early 1990s often used the label "ZX Spectrum and compatibles," the compatibles including later Spectrum models and clones.

Speaking of fandom, I have mentioned that people grow attached to computers and platforms because of practical considerations, as well as personal, affective and communal experiences.

The emergence of the first home computer platforms enabled these affections and experiences to be shared among users of compatible computers. The most dedicated Czechoslovak fans called their Spectrums "darlings" and engaged in debates over the merits of their Spectrum as opposed to other platforms. Like Nintendo fanboys, they defended their platform of choice against the supporters of the competing Atari and Commodore, or later Amiga and PC, computers. Additionally, many of them went to conventions and actively participated in creating software or writing articles for periodicals like *ZX Magazine*. On these accounts, they conform to Jenkins' conceptualization of the *fan* (Jenkins, 1992). However, I will avoid using this term in this chapter due to its anachronistic nature. In the early 1990s, Czechoslovak Spectrum supporters never called themselves *fans*, which was still a term mostly reserved for the domain of sports. They preferred the labels "*Spectrists"* („spektristé") or Spectrum *enthusiasts* ("nadšenci" in Czech). I will opt for the latter. Spectrum enthusiasts turned out to be the largest 8-bit computer user community in Czechoslovakia, and after the country's breakup in 1993, the Czech Republic and Slovakia. This was due to a combination of several historical circumstances.

The Sinclair ZX Spectrum as a platform

The Spectrum was one of the most popular home computer platforms in 1980s Europe. The "canonical" machine of this platform was the Sinclair ZX Spectrum, introduced to the U.K. market by Sinclair Research Ltd. in 1982. The computer was based on the Zilog Z80 microprocessor, had 48 kB of RAM[4], 256x192 pixels of color graphics facilitated by the ULA chip (manufactured by Ferranti), and a relatively user-friendly BASIC interpreter. At the time of its release, its audiovisual capabilities were relatively limited compared to other 8-bit computers such as the Commodore 64 or the 8-bit Atari machines; 16-bit IBM PCs also

became available around the same time. But price, not performance, was the Spectrum's selling point. The unprecedented price of 175 British pounds reflected the machine's low manufacturing costs (Adamson and Kennedy, 1986). The original Sinclair machine was apparently not "made to last." Although stylish, it looked tiny and fragile compared to the Ataris and Commodores of the era. Its notoriously unreliable calculator-style rubber chiclet keyboard would often break after a period of intensive use. The machine connected to TV sets instead of monitors. It did not contain any data storage device, and the common audio cassette became the primary medium on which Spectrum software was distributed.

Shortly after release, the Spectrum experienced a major shift in use. Advertised as the cheapest gateway to computing, and intended for education and home applications like accounting, it soon became primarily a gaming platform (Adamson and Kennedy, 1986). Thousands of games were produced during the Spectrum's 1980s heyday, many of which featured memorable breakthroughs in both design and programming; the Spectrum scene spawned a number of renowned studios like *Ultimate Play the Game*[5] (later renamed *Rare*) and "legendary" programmers like Pete Cooke[6] and Jonathan Smith[7], revered by Spectrum communities.

Unlike many serialized platforms we know today (like PlayStation), the Spectrum did not have a more powerful successor. The models which followed the original machine received only minor improvements. The Spectrum+ had a more ergonomic keyboard; several "128k" models, released in the latter half of the decade, added memory and 3-channel synthesized sound capabilities. Thanks to its popularity and relative simplicity, ZX Spectrum easily lent itself to cloning. Dozens of unofficial Spectrum clones were produced, especially in Central and Eastern Europe, including the Russian Pentagon or the Czechoslovak Didaktik.

The Spectrum's bastion in Czechoslovakia

The Spectrum's journey behind the Iron Curtain, and into Czechoslovakia, was far from straightforward. No Western computers were imported into the country en masse due to import embargos[8] and the country's shortage of foreign currency reserves. First, Spectrums were individually brought into Czechoslovakia by the chosen few who had the chance to travel to the West. The Sinclair machine became the most popular computer to import, mostly thanks to its low price – which nonetheless amounted to months' worth of savings for Czechoslovak citizens. Its size probably also played a role, as it was easy to hide and smuggle across the border, and thereby avoid exorbitant customs fees (Hertl, 1991a). Around 1985, a solid Spectrum community was already established in the country, spawning a prolific homebrew scene. At least two hundred Czechoslovak homebrew titles made in 1984–1990 have been preserved in online archives. Text adventures were especially popular, as the local audience could not play Western ones due to the language barrier (Švelch, 2013).

Thousands of imported Spectrums were soon complemented by domestic clones. Produced by Didaktik Skalica in Western Slovakia, Didaktik Gama was introduced in 1987. Despite import limitations, the company managed to secure the original Ferranti ULA chips. The Gama was therefore the first Czechoslovak computer compatible with a Western standard to be available to the general public at an affordable price – although production could not satisfy the demand (Bechyně, 1989). After the fall of Communism, the Gama was followed by Didaktik M in 1990 and Didaktik Kompakt (with an integrated disk drive) in 1992. Their austere design and frequent malfunctions notwithstanding, Didaktiks were relatively sturdy machines. More importantly, all Didaktik computers were supported by the manufacturer until the mid-1990s, which contributed to the relative longevity of the platform in Czechoslovakia (and later the Czech Republic). Reliable statistics are lacking, but various sources have estimated that there were tens of thousands of Spectrum compatibles already in the country before the production

of Didaktiks started (Libovický and Dočekal, 1987; Zajíček, 1987) and around 100,000 additional Didaktik machines were produced.[9] Given the population of Czechoslovakia (15 million in 1992), this meant there was roughly one Spectrum compatible computer per 100 people. According to ZX Magazine's 1994 poll, about two thirds of the readers owned a Didaktik and only less than one third owned a "real" Spectrum.

In the West, software for the Spectrum ceased to be published around 1990, while in Czechoslovakia, commercial games and other software continued to be released commercially until around 1995, mainly by two competing publishers: *Ultrasoft*, based in Bratislava, the capital of today's Slovakia, and *Proxima*, a company based in the smaller city of Ústí nad Labem and managed by the fresh electrical engineering graduate Petr Podařil, whom I interviewed for this chapter. Besides software, Proxima published *ZX Magazine*, the source of material for this chapter.

ZX Magazine ("ZX Magazín" in Czech) was founded in 1988 by David Hertl, a teenager from Northern Bohemia. It started out as a "samizdat" periodical circulating in dozens of copies at a time when independent publishing was technically illegal, and was "legalized" as a commercially viable business in 1990. In late 1991, Hertl, exhausted by running the growing magazine on his own, handed it to Proxima. Despite the changes in the editorial team, the overall style remained similar throughout the 1990s.

Right from the start, the magazine distinguished itself from other, rather utilitarian and technically oriented publications, by its uninhibited enthusiasm for the platform and its light-hearted tone; games were featured in every issue, along with programming tricks, interviews, tutorials and other materials. Some material was written by the magazine's staff, including Podařil and well-known Spectrum programmers Jiří Koudelka and Tomáš Vilím[10], but the magazine was dependent on contributions mailed in by – as Podařil called them –

"enthusiasts."[11] Despite the fact that it was a commercial venue, it directly interacted with the user community and trod the line between being a fanzine and a professional magazine.

Treasuring the platform: Spectrum as a foundational machine

In 1990, *ZX Magazine* writers started to observe that the Spectrum was becoming old. For many of the readers, this was the year when they could, for the first time, freely travel to Western Europe – only to find out that neither equipment nor software for their machines was available in German or Austrian computer stores. At the same time, many of the prominent *ZX Magazine* contributors were leaving the Spectrum for 16-bit computers, mostly Commodore Amigas and PC compatibles. At this point, *ZX Magazine* writers stood up in defence of the Spectrum. One of the strategies they adopted was to point out that Spectrum was a platform to be *treasured* because of its rich history and its foundational role in the development of Czechoslovak home computing.

In terms of home computing history, the 1980s were a unique decade. In most of Europe, this was the period of "first contact," when early home computer users purchased their first machines. The Spectrum often played the role of the "entry" machine – the machine that invited people into the fascinating, seemingly limitless world of general purpose computing – despite its minute proportions. As one of the contributors eloquently put it: "It is almost unbelievable how much the little piece of plastic called Spectrum can contain, how many interests and passions it can fulfil, as well as play, adventure, collecting, tinkering and creativity." (Macků, 1991, p. 25) The Spectrum marked the beginning of a journey – and, in some cases, a career. As another contributor, speaking on behalf of his homebrew collective, wrote: "All of us […] who started on the Spectrum gradually progressed further and we all remained faithful to computing." (Hertl, 1991b, p. 25)

Writers referred to the computer as "the good old Spectrum" and used both the British diminutive "Speccy" and the Czech word "gumák," a local nickname for the machine, derived from the word "guma" (rubber) due to the original model's rubber keyboard. At the same time, they often brought up the character of Sir Clive Sinclair, the quirky entrepreneur and inventor behind Sinclair Research who, according to *ZX Magazine*, "made it possible for even penniless people to own a computer." (Ručka, 1992) The "Sir Clive" phenomenon was most likely imported into the Czechoslovak discourse from the British computing press, which personified the Sinclair brand to a degree comparable to Steve Jobs' Apple (see Adamson and Kennedy, 1986). At the same time, the Spectrum was the symbol of 1980s Communist-era computing, and the attachment to it was often intensified by the experience of hardships one had to overcome to get hold of a computer under the Communist regime.

While acknowledging its rich history, *ZX Magazine* initially denied the possibility of the platform's demise and assured its readers of the Spectrum's continuing popularity. One of the contributors identified two main reasons for this: the fact that other computers were too expensive, and "the amount of software we inherited from Western companies which no longer exist, and that is still being produced domestically for reasonable prices." (Ručka, 1992) The vast libraries of widely available Spectrum software, including games, were indeed one of the most important reasons for sticking to the Spectrum. *ZX Magazine* did not only review new games, which were few and far between in the 1990s, but also games of special historic importance, offering for example a retrospective feature on games by the British programmer Pete Cooke.

Squeezing the platform: Almost better than the Amiga

When faced with the competition from so-called "higher category" computers like the PC or Amiga, Spectrum enthusiasts found ways to defend the Spectrum's hardware. They pointed out that the platform still offered relatively limitless potential, which could still be *squeezed* out of the small machine.

Throughout *ZX Magazine*, the Spectrum's hardware was praised for its clever and elegant design. A former Spectrum programmer wrote that when programming on the machine, he felt like its creators "had him in mind" while designing the machine's ROM (Hertl, 1991b). More importantly, the Spectrum's hardware was portrayed as something that could be *under total control* of the user. Compared to more complex platforms, the Spectrum was manageable: "A good [Spectrum] programmer has every bit under his control, knows what happens on every port and can therefore work miracles with this – some would say – toy. On the other hand, *Windows* crash [and no one knows why]." (Podařil, 1993) This closely relates to the values of hobby computing. For many early hobbyists, the fascination with the computer arose from the fact that it promised a space of control – that the machine did what it was told (Swalwell, 2012; Turkle, 2005). On the Spectrum, no clumsy, overcomplicated operating system stood between one's machine code routines and the computer. It was up to the coder to show how much he or she could achieve on this rather limited platform.

In the history of gaming platforms, especially those with fixed hardware features, software developers tend to keep getting better at leveraging the platform's capabilities – we can call this phenomenon *platform utilization progress*. Over the years, games for the Spectrum became more sophisticated and visually appealing, despite running on the same old machine. This made *ZX Magazine* writers hope that this progress would continue indefinitely: "Every year, I wonder if Speccy will survive the year, and every year I'm surprised that it does. This small computer is slowly becoming independent of time and the capabilities which it was originally given – the quality of programs is rising, although Speccy still remains the same as

those eleven years ago… it would be a crying shame if this was to change […]." (George K., 1993, p. 9)

ZX Magazine game reviewers praised those games that were pushing the limits of the Spectrum, especially when they achieved something that had been previously thought unimaginable on an 8-bit machine. Being equivalent – or even better – than a Commodore Amiga or a PC game became a measure of quality. Thus, the game *Iron Lord* (Ashminster Computing, 1989) was praised because it "again gets our computer closer to what people play on PC computers" (-BS-, 1992, p. 38), while *Navy SEALs* (Higgins et al., 1991) "has gained a lot of supporters because it's almost identical with the Amiga version" (-JSH-, 1993a, p. 7). In a jubilant review of *Darkman* (Box et al., 1991), the author exclaims: "[This game] is – attention! – better than the Amiga version. (…) [The Amiga version] may have more colors, better music and sound, but the graphics are appalling." (-JSH-, 1993b, p. 3)

Official 8-bit conversions of 16-bit hits were especially important for boosting the confidence of 8-bit communities. The two major titles were *SimCity* (Probe Software, 1990) and *Lemmings* (DMA Design, 1991). The review of the latter sums up the effect these titles had on Spectrum fans: "Have you often thought: I'll sell this piece of crap and buy a PC! But where to get money?! Don't worry, you don't need a PC, you already have it! Because this game […] has been a hit on 16-bit computers since 1991 and is now coming to the good old Spectrum. The eight-bit version is equivalent to the PC one, except for the monochromatic graphics." (B.S., 1992, p. 27)

As a software publisher, Proxima did its best to catch up with 16-bit production. George K. wrote the game *The Name of the Rose* (George K., 1991) (inspired by the novel by Umberto Eco, as well as by the Pink Panther movies), directly inspired by PC point'n'click adventure games like *The Secret of Monkey Island* (George K., 1993; Lucasfilm, 1990). Similar claims

were made about productivity software. ZX Magazine celebrated the fact that there were desktop publishing programs and Windows-style file management systems even for "the modest Spectrum." In fact, one of Proxima's most successful products was *Desktop*, a word processing and desktop publishing application. All of these are examples of backward implementation of trends and innovations which started on more powerful machines.

The magazine ran numerous articles which showed that there was still a lot to explore and to learn about the Spectrum, including various undocumented features, subtle differences between ROMs of different models, or novel ways of tweaking the video memory in order to simulate higher resolution graphics or remove the Spectrum's well-known color limitations.[12] The drive to "squeeze" more out of the machine is also evidenced in the introduction in 1994 of "Demorama," a running feature about local Spectrum demos, and a rather late effort to invigorate the relatively quiet Czechoslovak Spectrum demo scene.

The drive to learn the minutest details about the platform, and to push its limits through demos relates to the concept of *technicity* – the expression of one's identity through technical skills and knowledge, often valued in digital game cultures (Dovey and Kennedy, 2006). The fact that some of these skills were tied to a particular platform might have contributed to the users' reluctance to leave it.

Extending the platform: Interfaces and peripherals

When trying to extend the usefulness of Spectrums, commercial companies and hobbyists alike aimed to upgrade parts of Spectrum hardware and to connect machines to various kinds of peripherals or other computers. This was not an easy task, because the Spectrum did not have a standardized interface (comparable to today's USB) and was designed as a fixed rather than modular system. Despite these limitations, Spectrum enthusiasts welcomed any news of

the platform's new possibilities. *ZX Magazine* published updates on the Spectrum's compatibility with peripherals produced or available in Czechoslovakia; tutorials on how to connect and control them constituted a large part of the magazine.

Among the most popular upgrades were disk drives and additional memory. Disk drives became a common data storage system for Spectrums and Didaktiks in the 1990s. A number of competing standards were imported from the U.K., but the domestic D40, produced by Didaktik Skalica, became the most popular one in the country. According to *ZX Magazine*'s 1994 survey, the majority of their readers owned and actively used the D40. Several hobbyists found ways of expanding the machine's RAM to 80 kB or 128 kB. Some did the upgrades themselves, while others advertised their services to others in *ZX Magazine*. One of the ads read: "ZX 48 is dying, Sinclair 128 will survive the year 2000!" (Drexler, 1993, p. 16) However, the usefulness of this upgrade was debatable, as it did not make the machines fully compatible with the factory-made 128 kB Spectrums. Any games that required 128 kB of memory would have to be hacked and adjusted in order to function properly on the upgraded machine. On the other hand, the additional memory could come in handy for word processing applications.

Given the flimsy nature of the original Spectrum's rubber keyboard, replacing it with various kinds of makeshift keyboards was quite common in the 1980s, as it was the first thing one could do to extend the machine's lifespan. In the 1990s, some users started to connect "professional" keyboards to their Spectrums. In fact, it was not uncommon to connect peripherals designed to work with 16-bit computers: the Amiga mouse was suggested as the best to use with the Spectrum. A lot was written about printers, as well as topics including: how Spectrum enthusiasts could use their 8-bit darlings to capture video stills, receive teletext, control MIDI or exchange image files with IBM PC-compatibles. All of these extensions could make Spectrum a more useful, "professional" computer. It is difficult to

estimate how many users actually took advantage of them, but the discursive power of these examples is clear – the very possibility of the Spectrum interfacing with modern hardware seemed to postpone its decline into obsolescence. Displaying a digitized photograph on the Spectrum might have lacked practical application, but vividly demonstrated the machine's interoperability.

Emulation was the ultimate expansion of the platform. Spectrum emulators for the PC and Amiga promised the possibility of maintaining one's software collections and making use of them on the more powerful machines: "You don't have to fear that you'll lose your ZX Spectrum. There are several simulation programs for IBM PC priced in hundreds of crowns that allow you to more or less satisfyingly run most ZXS programs and games, including color and sound." (-rex-, 1991) In order to support this transition, a group of Spectrum users started a "consultation club for the users of Spectrum emulators for the PC." (ZX Magazín, 1993b, p. 10) But the possibility of emulation also meant that physical Spectrums might be easily replaced by virtual ones. Therefore, I will return to emulation in the next section.

Figure 1. Cover of the 3+4/1994 double issue of ZX Magazine, which demonstrates one way of *extending* the Spectrum. A colour dot-matrix printer commonly used with IBM PC compatibles has just printed out loading screen images from classic Spectrum games. A 5.25" floppy contains the Spectrum driver for the printer, published by Proxima.

Parting with the Spectrum: It's kismet

The valiant efforts of Proxima, *ZX Magazine* and the enthusiastic supporters of Spectrum could not stop people from abandoning their "darlings" for more powerful computers. *ZX Magazine* writers described this process as "mass migration" and wrote of the "Spectrum

faithful falling to the temptation of 16 and more bits." (Dohnal and Krejčí, 1993, p. 21) On several occasions, those who had just left the Spectrum community were jokingly scolded in the rumours section of the magazine.

As early as 1990, many prominent figures of the Czechoslovak Spectrum started to move to other platforms. As a *ZX Magazine* feature called "Wondering what they're doing now?" showed, they did so with various degrees of determination or sentimentality, and with different approaches to their machines as physical objects. František Fuka, perhaps the most influential and prolific local author of Spectrum games, switched to Amiga and simply sold his machine and "everything related to it." Another well-known programmer, Ondřej Mihula, kept the computer, reckoning that his children would perhaps one day play *Knight Lore*[13] on it. Neither of them made any new software for the platform after 1990 (ZX Magazín, 1992).

One of *ZX Magazine*'s former contributors, Czechoslovak Spectrum pioneer Jiří Pobříslo, sent a farewell letter, which the magazine published in full. Pobříslo describes his severance in rather emotional terms: "Please do not mail me *ZX Magazine* anymore. I love it and I root for it – but I have moved on. […] Spectrum is fading from my view, and there are others around who are more knowledgeable than myself." The directional metaphor of "moving on" highlights the narrative conceptualization of one's personal progression through a series of technological tools. At the same time, it creates a bygone place to long for, and thus potential for nostalgia. Pobříslo admits that he keeps his Spectrum tucked away on top of a closet – a typical "marginal" space for storing used things in Czechoslovak households. Like several other users, he defends his decision to switch in terms of both practical and financial concerns: "The professional basis on which I make (but most importantly, sell) my programs has forced me to work on whichever computer (and in whichever language) that my customers require." Pobříslo ends his defense with the words "It's kismet," *kismet* being the Turkish word for *fate* (Pobříslo, 1991, p. 15).

As I mentioned above, *ZX Magazine* initially denied the potential demise of the platform. But in 1994, the magazine's contributors seem to be readier than before to give in and accept the *fate*. In the 3-4/1994 issue, we read in two different articles that "progress cannot be stopped." One of them adds: "There will come a time when most of you will replace your 8-bit darling with something bigger. It will most likely be a PC." (Podařil, 1994, p. 57) For some users – especially those who were likely to sell their Spectrums and add the money to their PC budget – the parting with their "darlings" was expected to be difficult. As a 1993 article put it, "this painful occasion will surely affect your whole family and the more emotional characters won't be able to hold back tears." (Dohnal and Krejčí, 1993, p. 80) The exaggerated tone of this quote does not deny the emotions one can feel when giving away a favorite object.

Emulators were supposed to make the parting easier. They were hailed as a "solution" to the situation when one had to sell his or her machine. Despite the users' documented attachment to their machines, no one at the time advocated using "real machines" over the virtual ones that could replace them. A possible explanation for this is that for 1990s Czechoslovak users, the Spectrum platform was often an "abstraction" – to use Bogost and Monfort's terms – rather than a specific computer model with particular material properties. Most of them used Didaktiks – machines that were mere iterations on the Spectrum "idea." An emulator could be the next iteration.

Besides staying "faithful" or selling off their darlings, there were numerous other ways in which people moved to newer platforms. For many, the transition was smoother – they continued using their Spectrums while owning (or having access to) more advanced computers. Fan discourse on the pages of *ZX Magazine* nonetheless focused on the melodramatic aspect of the transition.

The gloomy editorial of the penultimate issue of ZX Magazine to be made by Proxima's editorial team (5/1994)[14] used the funeral metaphor. Addressing his readers as "Dear bereaved,"[15] the editor Tomáš Vilím admits that there are fewer and fewer Spectrum users. The only ones left are "diehards […] and those who cannot afford anything more expensive." He goes on to project Spectrum's future. "90% of today's Spectrum users will eventually buy something else, 7% will die off and the rest will soon become a user group of historical computers. They will painstakingly restore them, acquire various peripherals and discover long forgotten software. […] Basically, they will be something like vintage car, phonograph or music box collectors. It is hard to say how many years this will take, and whether it will pay off to store Spectrums in hermetically sealed boxes and wait for that time […]." (Universum, 1994) In other words, he is announcing the imminent end of the platform's initial lifespan and its potential revival as a collectible "retro" machine – a process later theorized by Swalwell (2007). Vilím's message is clear: Spectrum has become obsolete.

Despite this statement and Proxima's exit from the Spectrum market, the magazine continued to be published – although less frequently – until 2005, while changing hands several times and becoming more of a fanzine. Although gradually smaller, the core fan base has kept meeting at various conventions. At the time of writing, a fan group connected to *ZX Magazine* keeps actively maintaining the magazine's website.

Conclusions

This chapter has chronicled the efforts of Spectrum enthusiasts to extend the lifespan of their platform of choice. I have identified three basic categories of their activities: *treasuring* of the platform, *squeezing* the most out of it (while believing in further *platform utilization progress*), and *extending* it via peripherals and interfaces. All of these activities could

manifest both through discourse and through practical projects. One could, for instance, squeeze the platform by writing an article about its capabilities or by creating a demo which proved his or her point. It is likely that fans of other platforms engage in similar kinds of activities, especially when threatened by the platform's imminent commercial demise (cf. Vanderhoef, Deeming and Murphy, this volume).

While some of the developments I have outlined may hold for other regions, this story was set firmly in the context of post-communist Czechoslovakia. The country was one of the Spectrum's last European bastions, thanks to both its initial popularity as an unofficial import and its later sustained support from Didaktik Skalica. Importantly, Czechoslovak Spectrum fandom was intertwined with various small local businesses that provided software and services for the platform. The local community was largely autonomous in the 1990s, producing games and productivity software in Czech or Slovak for the Czechoslovak market, somewhat independent from (although familiar with) the developments in other countries of the region.[16] Only in the late 1990s did *ZX Magazine* start to closely follow the enduring and prolific Russian Spectrum scene, a topic which remains to be researched.

To some extent, the emotional attachment to the Spectrum was due to its being the first home computer Czechoslovak citizens could own. Given the difficult economic situation of the country, many people stuck with (or were stuck with) the Spectrum because they could not afford to switch to a more powerful platform. It rarely became "trash" – more often, it was either stored as a memento or sold to offset the price of a new computer.

The dictate of obsolescence is neither immediate nor unconditional. The case study of the Czech Spectrum demonstrates that computer enthusiasts rarely just "discard" old technology as trash. In this respect, scholars of industrialized obsolescence like Slade or Sterne submit to the same logic of unconditional succession of technological artefacts that they criticize.(Slade,

2007; Sterne, 2007) It would be an oversimplification to say that a platform can be consumed or used up, as there is always more to learn about it. Different "generations" of hardware often live more or less happily, next to one another. While some people in 1994 were playing *The Secret of Monkey Island* or *System Shock*, others enjoyed the vast libraries of 8-bit home computer software. Their darling Spectrums were more than mere instruments used to run games. They were also containers of memories, means of self-expression and reminders of the rich history of home computing.

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[1] The magazine was published bi-monthly, with some exceptions.

[2] All material was originally in Czech; I have translated the quotes used in this chapter.

[3] A major Czechoslovak computer club, for example, splintered already around 1982 into two sections based on the CPU that the programmers specialized in programming for (Libovický, 2011).

[4] A cheaper 16 kB version was also released, but soon phased out. Most Spectrum games require 48 kB of memory.

[5] Ultimate Play the Game were among the most influential British game developers of the 1980s. They produced games like *Jetpac* (1983) and introduced the isometric 3D action adventures with Knight Lore (1984).

[6] A prolific British game programmer, author of games like *Tau Ceti* (1985) which used real-time 3D graphics, which was considered a feat on the ZX Spectrum.

[7] Author of popular titles like *Cobra* (1986). His games were renowned for fast animation, parallax scrolling and attractive gameplay.

[8] For more about the impact of import embargos on hobby computing in the Soviet bloc, see (Stachniak, 2015).

[9] A figure provided in Didaktik's advertising, which seems realistic when corroborated with partial information in other sources (Kerekeš, 1993; ZX Magazín, 1993a).

[10] Writing under nicknames George K. and Universum, respectively.

[11] All of them were male; no article has appeared in the magazine that was written by a woman.

[12] In hobbyist and gamer discourse, the specificity of a platform is defined not only by its "positive" parameters, but also by the deficiencies and quirks that programmers (and users) have to overcome. In the case of ZX Spectrum, the most notorious quirk was the "attribute clash," a phenomenon caused by Sinclair's thrifty design. The machine was nominally capable of displaying 8 colours in two different levels of brightness. But in order to save video RAM, only two colours of the same brightness level could be used in one 8x8 pixel square (or attribute block). This meant that colourful animation was hard to achieve as sprites took on the colours of the background or vice versa. As my material shows, creative avoidance of attribute clash was repeatedly hailed as one of the most celebrated skills of Spectrum coders. For more details, see (Hughes, 2014).

[13] A groundbreaking isometric 3D action adventure game (Ultimate Play the Game, 1984).

[14] The following issues were published by *Heptau*, a Prague-based group of Spectrum enthusiasts.

[15] A literal translation of "drazí pozůstalí," a standard Czech expression used when addressing funeral guests.

[16] Proxima tried to contact British companies in order to sell some of its software in the U.K., but to no avail – despite the fact that their early 1990s production would have been competitive with the few British titles that were still coming out.