

From Storyspace to Browsers. Translating *afternoon, a story* into Polish.

Mariusz PISARSKI

About the author

mariusz.pisarski@ha.art.pl

University of Warsaw, Department of Intersemiotic and Intermedial Studies.

PhD, Research Associate.

Mariusz Pisarski is a researcher, digital producer and chief editor for "Techsty." a journal on new media and literature. He has been creative director for the Korporacja Ha!art magazine from Kraków. He is the author of *Xanadu. Hypertextual metamorphosis of prose* (Kraków, 2013), editor of *Michael Joyce: a Polish writer* (2011), and *Literary hypertexts. Literature and the New Media* (with Piotr Marecki). He holds a PhD in hypertext from Adam Mickiewicz University. He is also a member of the Electronic Literature Organization, and currently a SAIA scholar at the Institute of World Literature of the Slovak Academy of Science, Bratislava. His translations of digital literature works include *Hypertextual Consciousness* by Mark Amerika, *L0ve0ne* by Judy Malloy, *Hegirascope* by Stuart Moulthrop, *Sea and Spar Between* by Stephanie Strickland and *Nick Montfort* and a collaborative opus magnum: *afternoon, a story*, by Michael Joyce.

Abstract

afternoon. a story, the classic hypertext fiction by Michael Joyce¹, did not wait long after its official release to be translated into other languages: it appeared first in Italian, then in German². In the following decades, after dramatic advances in computer technology made the original environment in which the work was written ever less accessible for readers, translators and publishers, the translational situation of *afternoon, a story* changed significantly. Today, retaining *afternoon's* original format (a stand-alone Storyspace Reader file for Mac and Windows distributed on a CD-Rom) is no longer possible³ and translators face a series of challenges on several levels, ranging from programming to distribution. In this article, which is based on my experiences in taking part in the translation of Joyce's computer novel into Polish⁴, I will try to point to those challenges and demonstrate how we have overcome them. Finally I will expose the strongest and the weakest aspects of the solutions our Polish team has devised, some of which might call for future improvements from other teams of translators, programmers and publishers.

1 JOYCE, Michael, *afternoon, a story*, Watertown MA, Eastgate Systems, 1999.

2 The translational work on Joyce's most discussed hypertext novel could not be done without an extensive research into the vast body of scholarly work and articles published by Joyce himself (Joyce 1997), Jay David Bolter (Bolter 2001) and Mark Bernstein (Bernstein 2002) who were involved in the creation of Storyspace. Most notable are the close readings of *afternoon* by Bolter, Jane Yellowlees Douglas and Jill Walker (Walker 1999): see bibliography section. An excellent recapitulation of the development of Storyspace and *afternoon, a story* has been recently published by Belinda Barnet (Barnet 2012).

3 Due to the lack of support for the Storyspace application both from Apple and Microsoft OS X, versions from 10.6.7 Snow Leopard up are not able to read the Storyspace file at all. Microsoft Windows versions from XP and up, although able to open the file, have trouble displaying its content.

4 JOYCE, Michael, *popołudnie, pewna historia*, transl. Radosław Nowakowski, Mariusz Pisarski; programming: Jakub Jagiełło, Kraków, Ha!art 2010.

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THE HISTORY OF POLISH TRANSLATION

The original goal of the Polish editorial team in 2006⁵, then without any programmer, was to publish a localized version of *afternoon, a story* in its original environment: the Storyspace Reader – a non-editable, export version of Storyspace by Eastgate Systems⁶. As such, the main text of the novel was ready for testing in 2007, just after Radosław Nowakowski, having worked with a linear version of *afternoon* (a Word document exported from the Windows version of *afternoon, a story*), translated it into Polish. Unfortunately it soon turned out that further steps in this publishing direction were seriously hindered by the limitations of Storyspace. The program was written for languages that use the Roman script and did not allow for Polish diacritics, defined either in Central European script or in UTF, where they are fully supported. As a result, the text could not be viewed properly. Moreover, creating links in the Storyspace link menu was impossible on words with diacritics, as they were automatically broken down into two separate sections: before and after a diacritic mark. A limited test version without diacritics was made, but only for internal use and as a pitch version for the future. Even excellent interaction with Eastgate Systems and Mark Bernstein's welcoming attitude could not help. Storyspace, as a 20-year-old piece of software, would have needed a major overhaul much earlier than 2007, but even in 2014 it was still yet to come⁷. The initial complications forced the publisher to shelve the project for the next two years.

On coming back to the project it became evident that a Polish translation, and in fact any other translation to be done today, had to abandon the native environment of *afternoon, a story*. Even even though Storyspace, the system that had given birth to the distinctive genre of the node-link hypertext fiction in the history of e-literature, had survived numerous technological changes on both Mac and Windows platforms, it had become an obsolete piece of software. Negotiations with Eastgate Systems had started then: we were to determine what form the translated – and this time ported – version of *afternoon, a story* might be taking. Throughout the decision process

5 The Polish team comprised of the main translator (Radosław Nowakowski, author of the Polish hypertext fiction *Koniec świata według Emeryka* and a professional translator of printed fiction), the programmer (Jakub Jagiełło, author of generative poetry), the editor (Piotr Marecki, publisher of avant-garde literature) and the producer (Mariusz Pisarski, author of several previous e-literature translations into Polish, including *Hegirascope* by Stuart Moulthrop and *10ve0ne* by Judy Malloy).

6 Written in 1987 and demonstrated along with Storyspace system during the ACM Hypertext conference the same year, *afternoon, a story* had been a Macintosh program for the first 9 years of its existence. In 1996 Eastgate Systems published a Windows version. From 1999 on both were distributed in a joint CD-rom edition. The Windows version reveals Storyspace maps and several views of the text (tree-view, outline) that were hidden from users in the original Macintosh version. One might imagine future editions or translations that would make use of these visualisation modes for an additional level of interaction.

7 According to Mark Bernstein, Eastgate Systems has been working on Storyspace 3 for OS X and the iPad throughout 2013, <http://www.markbernstein.org/Apr13/Patchwork.html>, 2013, accessed on April 15th, 2014.

Michael Joyce had given us his full support: his main goal was to see the completed project in the hands of Polish readers. Eastgate, although traditionally supportive⁸ imposed one condition: the Polish version was to come in a stand-alone, strictly offline version. With these restrictions in mind Ha!art published an online announcement looking for a programmer and soon Jakub Jagiełło joined our team. His task was to look for the best available programming options that would result in a friendly, familiar and easy to understand interface for reading a hypertext fraught with conditional links and with a trackable reading history as its core mechanism for determining its outcome.

THE CODE

The decision as to what direction the transition from Storyspace to a new environment should take was not difficult to make. If one wants to present the hypertext classic within an easy to understand and familiar interface, a web browser remains an undisputable choice. Nevertheless, choosing the most popular tool for browsing the Internet, and in fact for interaction with computers in general, came with one predicament. Conditional links, in which *afternoon, a story* abounds, point to a process of tracking the user's steps within the reading framework. Outside of computer games, where this mechanism is necessary to match and score the progress of gameplay, tracking might be associated with an unwanted "smart" advertisement that matches the content of adds to users' browsing history (Amazon's website and its recommendation system is an example of this). Worse even, the same tracking system might be associated with a practice of compiling the details of users' behavior in order to build their profiles complete with numerous personal preference data that can be sold to web marketing companies⁹. In our case, although we still needed to find out how to match the browser cache with Storyspace's functionality, the off-line only mode made this problem solvable¹⁰. Jakub Jagiełło's choice of programming platform fell on the user interface markup language (HTA) in combination with Extensible Stylesheet Language (xsl). Both let developers transform and render xml documents and allow for controlling and tracking the reading process in a way similar to a fully self-contained, and "trustworthy" application, bypassing the internet browser security model¹¹. This solution had two significant advantages. Firstly, as opposed to some other scripting languages (php for example) it runs offline. Secondly, as a "html application" HTA supports stylesheets, text files and popular images formats (.png .jpg), which allowed us to work with common contemporary web design tools. This was crucial for the efficiency of our low-budget, small team project. After scripting

8 I worked on translation of Mark Bernstein's *Hypertext Garden* and *Patterns of Hypertext* a few years before *afternoon, a story*. They had appeared in the online magazine "Techsty," <http://techsty.art.pl>, accessed on April 15th, 2014.

9 The problem of third-party tracking cookies, responsible for compiling long-term records of individuals' browsing histories prompted European and U.S law-makers to change the internet policy in this regard. See: *HTTP cookie*, Wikipedia entry, http://en.wikipedia.org/wiki/HTTP_cookie, accessed on April 15th, 2014.

10 Taking *afternoon, a story* onto an online browsing system could mean that the user gives his permission for accessing his own "data"(status of reading) at literally every page. This is in fact what Internet Explorer 6 is asking for, even in the off-line mode. For this reason, we clearly indicate in the *Read me* file, that *afternoon, a story* is supported by Internet Explorer from version 7 and up.

11 *HTA*, Wikipedia entry, http://en.wikipedia.org/wiki/HTML_Application, accessed on April 15th, 2014.

the program's logic and rules that would mirror the core functionalities of Storyspace, and after attaching javascript, xsl and css stylesheets to the main HTA file, the major work on porting *afternoon, a story* to the web browser took place within simple xml files and their minimal and extremely clear mark-up. We also included a small python script, responsible for displaying the titles of the neighboring lexias in the links menu that could be opened on any single page. It was “invisible” in the same way as other files linked to the framework: the editor's job relied on inputting text, defining the conditions and entering the source and destination page names in the fields provided (*href_title*, *href_rev_title* respectively). This is what a single page of the hypertext novel looks like:

```

<?xml version="1.0" ?>
<?xml-stylesheet type="text/xsl" href="linki.xsl" ?>
<leksja href="Canterbury_Tales" href1="I_call_Lolly"
title="Opowieści kanterberyjskie"
title1="sekret Lolly"

q="v('I_call')"
no="Canterbury_Tales"
yes="me_g"

href_rev_title="Opowieści kanterberyjskie" href_title="pętla"
no_rev_title="Opowieści kanterberyjskie"
yes_rev_title="ja *" yes_title="historia P."
href_rev_title1="sekret Lolly2" >

<p>
<lt;To tyle o mnie-- mówi-- A jaka jest twoja <a
href="Horrors_of_Acron7" rev_title="Terror na Akronie"
title="historia S">historia</a> &gt;</p>

<p><u><a href="me_g" rev_title="ja *" title="historia P">Moja?</a>
Czy <a href="Nausicaa9" rev_title="Nauzyka9" title="historia
N">Nauzyki?</a></u>

</p>
<menu>
<li>me_g</li>
<li>Horrors_of_Acron7</li>
<li>Nausicaa9</li>
<li>I_call_Lolly</li>
</menu> </leksja>

```

1. *afternoon, a story*, the code layer for the lexia “Canterbury Tales”.

afternoon, a story is entirely distributed along over 200 xml files, quite similar to the html files. The most significant difference is a linking system, based not on the traditional linking of html, but on the flexible programming convention of xsl transformations. They allow for the links, which are defined in a separate xsl stylesheet (links.xsl) to be referenced at the top of each page, as well as within the text body. This permitted us to set up conditional links on the default path of reading, triggered by pressing “enter” on a keyboard or by clicking any word that

was not hyperlinked. In other words, if a lexia contained conditional links, an xsl-derived logic of addressing the conditions was applied. Transposing the original Storyspace conditional linking system, in which *afternoon, a story* abounds, and which forms its mechanical core, was the center of our translation and porting process. In this multilinear story of alternative endings, a conditional link's function was to ensure that the reader encountered a certain scene in a predetermined order or after meeting certain story-related conditions. Setting up the link conditions on a text anchor in Storyspace relies on determining the "guard filed" content by following some simple mark-up and by entering the names of source and destination lexias into the link window. For example:

LINK NAME DESTINATION GUARDFIELD

Shrapnel Red Desert "begin"&~"fragments"&~"die"

The command "*begin*" &~ "*fragments*" &~ "*die*" allows the link *Shrapnel* to be followed only if readers have visited the lexia "begin" but neither "fragments" nor "die". Using the logic and operators of xsl, the very same condition in the Polish version takes a following form:

```
< leksja title="znaczy"  
  title1="odlamki"  
  href1="Red_Desert"  
  href="fragments/the9"  
  
  q="v('begin') ? (v('die') &amp;&amp; ('fragments/fragments') ? 0 : 1) : 0" >
```

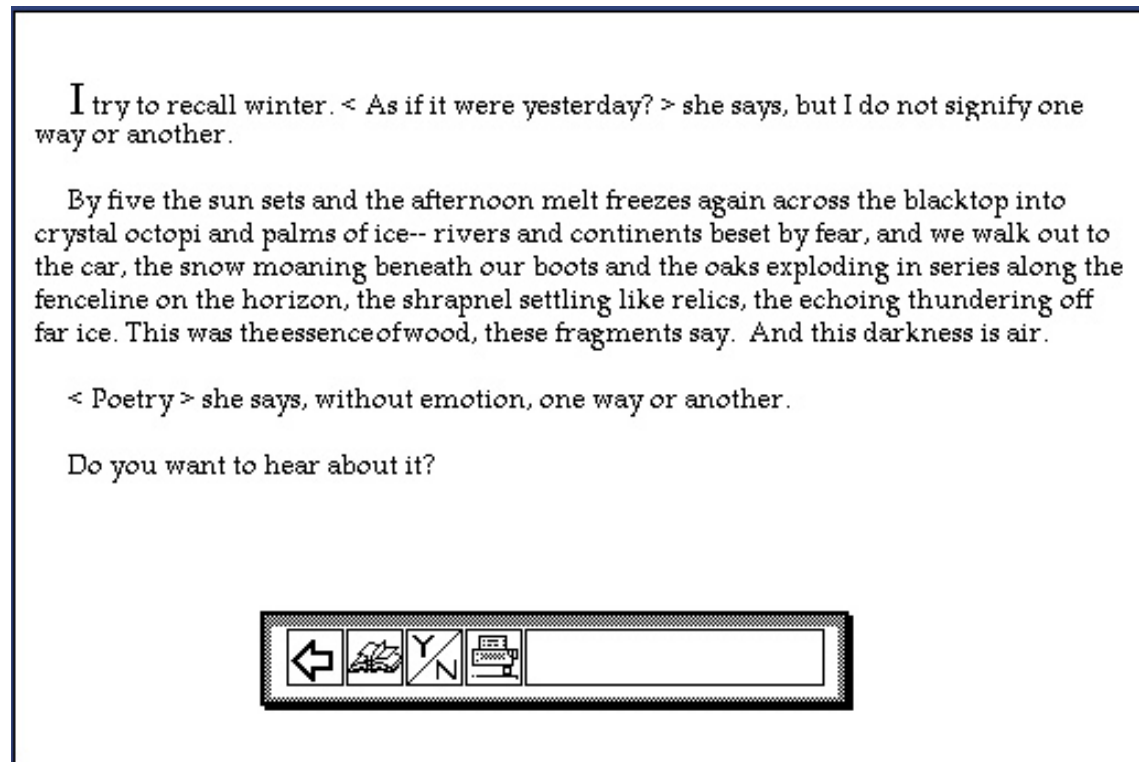
The values of 0 and 1, visible after the "?" operator hide two destinations that are taken into account. Readers can go from there either to the lexias entitled "Red_Desert" or "the9", defined in href="fragments/the9" (0) and href1="Red_Desert" (1). The combined conventions of HTA and xsl do not result in a coding as clean and elegant as in Storyspace. Nevertheless they take up much fewer lines of code than the pioneering system of conditional linking for the web made by Robert Kendall, and do not bear some of the limitations of the latter¹².

A final piece of coding that we had to address in the Polish translation was the functionality, or simulation, of a direct conversation with the text, available via the dialog window that accompanies each lexia of *afternoon, a story*. Instead of clicking on selected words users could enter them (or in fact any text they wished) into the dialog field, press enter and wait for the Storyspace Reader to direct them to an unknown destination, perhaps somehow related to their text input. This functionality mirrors the linking system of Storyspace with the addition of new variables: if the text that has been entered is not found in the lexia's content, the user is directed to a default location. If, on the other hand, at least part of the input is found within the body of lexia, the user is directed accordingly, just as if the matched word had been clicked. To facilitate this interaction with the story, an additional snippet of javascript code was created, in which these conditions, along with basic morphological rules of the Polish language, were determined.

¹² Word Circuit Connection Muse from 2006 was a set of javascript tools and a Dreamweaver plug-in to support conditional links on the web. Although perfectly viable with a moderate use of conditions applied to links, the system was much less friendly to some more complicated cases, where many conditions are stacked on the same linked word, which happens on several occasions in *afternoon, a story*. See: <http://wordcircuits.com/connect/>, accessed on April 15th, 2014.

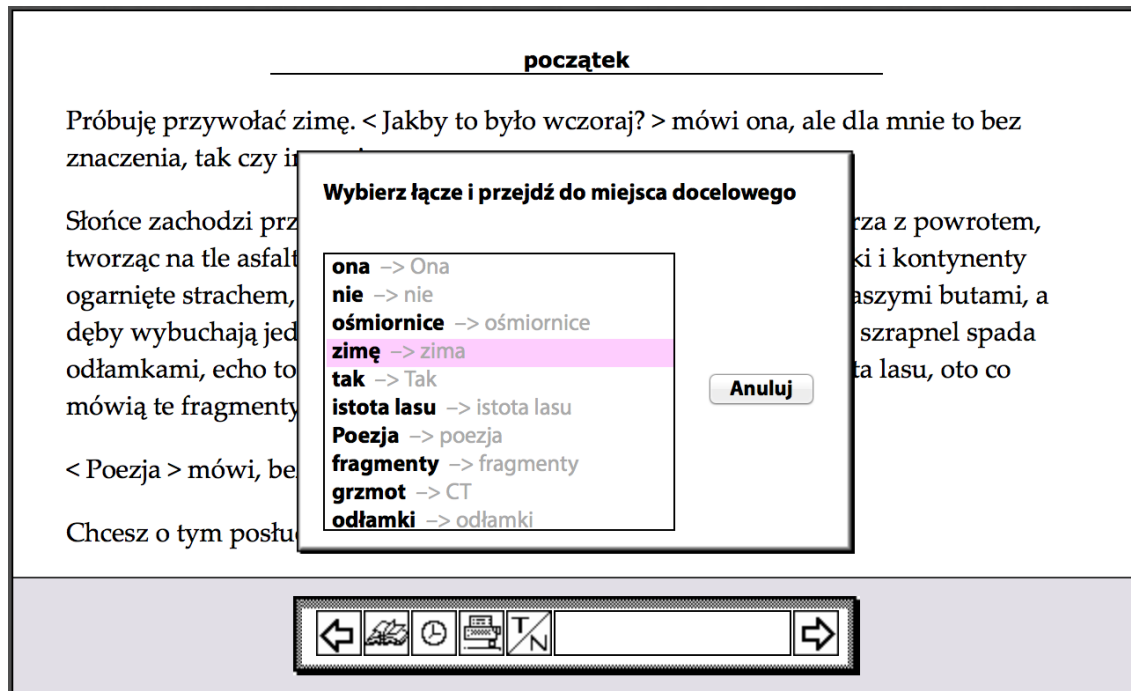
INTERFACE

Because the Macintosh was the platform on which *afternoon, a story* was originally conceived and made its fame, our intention was to be functionally and visually as close to this classical environment as possible. Considering that thanks to HTA and xsl we had a whole range of tools used in contemporary web design the task was quite straightforward.



2. *afternoon, a story*, Macintosh.

The original toolbar, with yes/no, back/forward, link menu, a print button and the dialog box was recreated. To make navigation easy and to mirror the familiar browser functionality within the work's interface we also decided to add a reading history menu accessible from the toolbar, which was not present in the original Apple version. The result was a familiar white text window of *afternoon, a story* placed against the expandable gray background of the browser's canvas:



3. *afternoon, a story* in a browser with the link menu opened.

Although the resulting inner interface of the work, within the outer interface of the browser, was made according to Michael Joyce's suggestions and the minimum requirements he asked us to implement, one can envision a more complex set of visual aids and paratextual functionalities, similar to those found in the later Windows versions of *afternoon, a story*. It made most of Storyspace features, like map view, outline and tree-view available in the slimmed down Storyspace Reader version that shipped with Joyce's work. Especially the map view, a dynamic, visual, multi-layered pane where connected rectangles representing the text segments made readers more aware of the novel's structure, would be a precious addition. In our case though, having sparse resources, not much time and the browser as our framework, this task was impossible to implement. Although it is hard to imagine some future ports and translations, especially on mobile platforms, that would not put this helpful addition of the map overview in use.

The Polish version of *afternoon, a story* shipped as a stand-alone, cross-platform and cross-browser digital publication distributed on a CD-Rom and wrapped in a DVD case, with an illustrated cover of a black and white, roadside landscape akin to the CD-Rom version of the bundled Mac and PC edition by Eastgate (1999). Not only for contractual reasons, but simply because there were no attractive alternatives around in 2009, when *popołudnie, pewna historia* was taking its shape, the Polish edition fully followed the original distribution model of a stand-alone, physically bound software. As such, seen from today's perspective, *popołudnie* clearly belongs to an already bygone era before the time of iPad, downloadable apps, and digital reads that sync via Cloud with whatever device the reader is comfortable to proceed at a given moment.

But there were some signals of change, of a shifting paradigm, although neither Jakub Jagiełło

nor me could read them clearly. Namely, there was an issue with the Chrome browser. All existing browsers: Firefox, Internet Explorer, Safari and Opera did support HTA/xsl version of *afternoon, a story*. The only exception was Chrome. I was rather obvious that the main reason for the lack of support for offline cache browsing was Google's attempt to create an online only operating system (Chrome OS was announced in 2009). One could predict a forthcoming lackluster reception of the online-only desktop system, even envision a possible future reversal of the steps Google had taken in the direction not in line with Microsoft's vision behind HTA, but it was quite hard to predict that both Chrome OS and the very idea of cross-platform compatibility of a single software would be overshadowed by the enormous popularity of the Android platform and the wars between mobile systems that followed the introduction of the iPad and other tablets, "phablets" and ubiquitous smartphones. From then on, everyone who is brave enough to publish a classic hypertext fiction from the pioneering era of e-literature, cannot bypass mobile, almost online-only and instantly synced mobile platforms.

TEAMWORK

The central area of focus during the work on our version of *afternoon, a story* emerged at the crossroads where programming, translating and interface-building meet. Nowakowski, the translator of the text proper, did not know (and did not have to) the programming details, for example our decisions as to what platform and scripting base the port was migrating to. On the other hand Jagiełło, the programmer, was not familiar (and this was not necessary neither) with the whole text and paratext of *afternoon, a story*. The former could not be involved in programming, the latter – in translation. The point of connection and exchange lay on the producer's desk. As a web designer, who was building the front-end layer of the work, as a second translator, responsible for the text in link menus and link titles, and as someone who – step by step and lexia by lexia – implemented Jagiełło's conditional link rules, it was the editor who had the general overview of the whole emerging picture. Thanks to his somehow spread competencies that allowed him to enter the field of code and penetrate the intricacies of translation, the work on the producer's desk could proceed at a steady pace. Of course, in the moments of doubts and serious challenges (like stacking of guard fields or Joyce's word-plays) I had to discuss my trouble with the programmer or the translator.

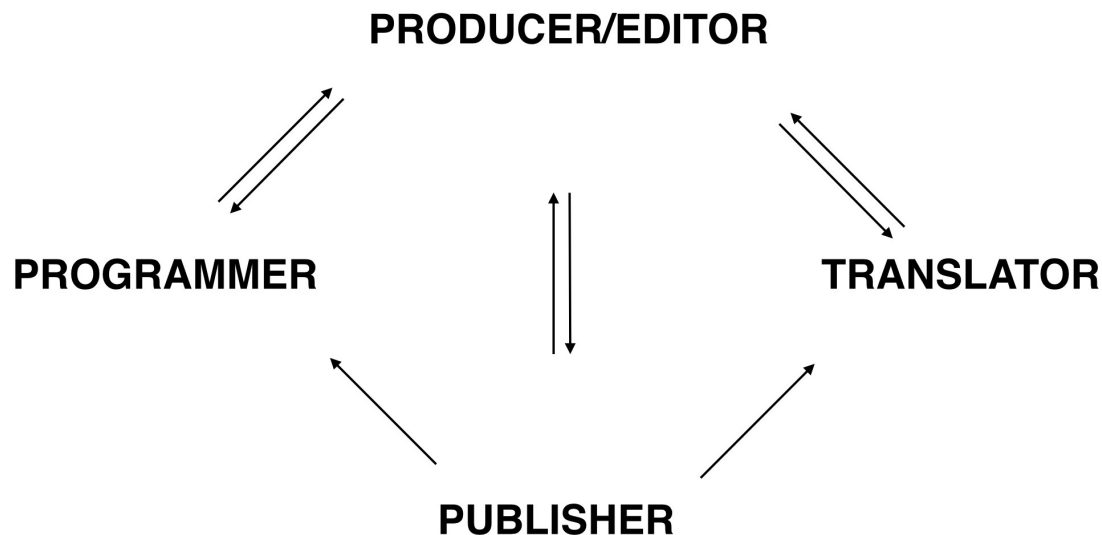
Not a small part of the producer's job consisted in the Storyspace roadmap analysis. It was during this process that every segment of the novel was scrutinized within its closest networked context. As each lexia in this multi-linear environment can have several, or even as much as 10 or 14 lexias preceding it and an equal number of segments that follow in turn, the roadmap (accessed from the full version of Storyspace) allowed for crucial language-specific corrections, for example unifying the grammatical gender of a narrator or narratee, or when necessary, for erasing any grammatical indicators as to who was speaking.

One can imagine a team comprised of a minimum number of people, let us say just two: a programmer and a translator. It seems quite feasible for a 1:1 translation, as was the case for German and Italian versions of *afternoon, a story*, where the platform and even the font encoding conventions remained roughly the same (Storyspace and the Roman script). In such situation, the

programmer addresses all the technicalities of the already established programming framework and the translator just cares for the text (though they might be tossing coins to determine who is doing the job of inputting the text in the guard fields and link menus).

But in a process involving both translating and porting, when the new platform has to be built from the ground up and when the work in question is *afternoon, a story*: a complex web of hypertextual, intertextual, paratextual and – finally – metatextual relations, even our four-person team seems to be small, although it at least mirrored the line-up of the original team that created Storyspace, consisting of Jay David Bolter, Michael Joyce, John Smith and Mark Bernstein.

A *spiritus movens* behind the idea, preparations and our day-to-day work on *afternoon, a story* was Piotr Marecki, the founder of Ha!art: an independent, non-profit publishing house from Kraków, specialising in experimental and Avant-grade literature. The early, Roman script versions of *popołudnie, pewna historia* from 2006, the failed versions with Eastern European script and finally the drafts and working prototypes of the browser version were always passing through the publisher's hands, prompting discussions, suggestions or – most tellingly – silence. It was also Marecki who – within the existing constraints – had made the crucial decisions regarding distribution, promotion and pricing.



4. The teamwork structure.

In an ideal world, the translation and port of *afternoon, a story* from Storyspace to desktop browsers, or – even better – to all possible platforms, would take place under conditions where all the involved participants would have easy access to all previous variants of the work on the Mac and Windows versions, in English and in their available translations, and all of the work would be annotated and visualised in a collaborative management system (a Tinderbox file containing a version of *afternoon* imported from Storyspace would have been a good starting point). Of

course, these optimal prerequisites were, in our case, not met. Nevertheless, considering the budget we then had at our disposal, and the manpower involved, I hope we did a good job for that particular moment. It does not mean that revisions, updates and re-reporting will not be needed soon, especially in the light of the ubiquitous, mobile and cloud oriented reading technologies that are rapidly replacing the desktop paradigm within which our project was still operating.

CONCLUSION

Translating *afternoon, a story* into Polish has been the first full scale effort to migrate this hypertext novel into a new software environment¹³. It occurred when an old model of digital publishing was giving way to a new one. Our project belongs to the former, so-called PC model in contrast to its younger successor: the post-PC paradigm. This "translation on the edge", to paraphrase editors of the pioneering journal *Writing on the Edge* where Joyce, Carolyn Guyer and Martha Petry have published their hypertexts, clearly demonstrates the significant changes that took place between the golden age of hypertext fiction and today's publishing practices. One of the most striking ones is the shift towards the idea of an accessible, cross-platform work. By making the Polish version run on most major browsers and on any operating systems we wanted to counterweight the offline only requirement that both publishers, Eastgate and Ha!art, had agreed to. A reader who gets hold of *popołudnie, pewna historia* can open it on practically any computer, even an old one, either in a library, a bookshop or at home. Paradoxically, the always online, post-PC era of mobile, ubiquitous computing¹⁴ has imposed its own share of restrictions that affect both publishers and readers. While the PC desktop platform for publishing was moving towards web oriented cross-browser and cross-platform content, the mobile world tends towards discrete mobile systems (similar to the game consoles' market) each with its own programming foundation, its own "marketplace" and distinct tools for developers and publishers. Numerous challenges and difficult decisions await the authors of future editions, translations and ports of *afternoon, a story*. They could move in two different directions. In the first one, the publishing would rely on a series of ports for a variety of competing mobile (and desktop) platforms. In the second, which I imagine similar in scale to our low-budget project, the result would take a form of a web-app: a solution independent of any system and accessible by any browser. The forthcoming publication of the French translation (Regnauld, Tissut, Vanderhaeghe, to be released) might shed some new light on some other possible solutions.

13 Excerpts of *afternoon, a story* were published online along with the print publication of *Postmodern American Fiction. A Norton Anthology*, in which Joyce's work was included. The web version, powered by a Java applet, can still be read today on some PC configurations, www.wwnorton.com/college/english/pmaf/hypertext/aft/index.html, accessed on April 15th, 2014.

14 The notion of "ubiquitous computing" has been discussed in BURDICK, Anne, DRUCKER, Johanna, LUNEFELD, Peter, PRESNER, Todd, SCHNAPP, Jeffrey, *Digital Humanities*, Cambridge, MIT Press, 2012, p.58-59.

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