“It looked easy when presented this way.”

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Knowledge Management  
Consultant

The 6th Report
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What happened?

Carlos Costa challenged me to give a class on the importance of technical writing to his students of Software Engineering. However, he warned me that these students preferred technical topics and might despise management topics, for example. In the end, I decided to approach this class by recounting 21 of my experiences with different writing tools.

Nineteen people attended the special class, including fourteen students. Presenting the 60 slides ended up taking all the 90 minutes available, leaving no time for questions. Alas, students had to hurry up to the next class, which happened in a room in the opposite side of the building.

The audience was kind in the fourteen public reports. Half of the audience appreciated the historical perspective, but one person wondered whether the materials were out-of-date. Five persons enjoyed seeing the variety of editors, LaTeX, and LinuxDoc.

Only three persons explicitly mentioned that the presentation was too long. I interpret that fact as a sign that the topic is interesting enough. But the long presentation prevented any interaction, and eight persons wanted more interaction, examples, or live demonstrations.

— Joaquim Baptista, px@acm.org

A clear, simple, and compact presentation of the history of the technology related with technical writing. It looked easy when presented this way.

— Anonymous #12
Joaquim Baptista

Joaquim starts 2015 as an independent Knowledge Management consultant. He draws on his extensive experience to offer effective solutions with the sophistication that typically requires a whole team of consultants.


Joaquim “px” Baptista

Effective Knowledge for Effective People. Your flexible consultant for knowledge management.

Learn what your company should know!
Learn where you stand to plan for the future. Your company cannot manage what it does not know.

Manage with agility!
Discover and deliver incrementally. Remove annoyances, manage risk.

Optimize the flow of your company knowledge!
Structure the company knowledge for consumption and maintenance. Have a place for everything.

Make your knowledge easy to consume!
Write clear thoughts in clear words. Inspire with illustrations and comics. Explain APIs with code samples.

Design effective training and demos!
Create inspiring demos. Create hands-on lessons or tutorials with guaranteed learning objectives.

Craft your company software!
Capture requirements precisely. Design the customer experience. Streamline decisions for everyone. Automate.

Protect the future with open formats!
Embrace flexible tools and open formats that adapt to the growing needs of your company.

He adopted and refined agile practices since 2004, and published the 2008 practices at ACM SIGDOC’08 under the name uScrum. He continuously adapts the agile practices to suit the needs of an evolving team and evolving workload.

Before tackling documentation he worked as trainer, programmer, system administrator, and academic researcher.
Industrial Writing Tools

Writing and maintaining thousands of pages.

Context and authors determine best system.

- Desktop publishing is convenient and widespread.
- Plain text formats are easy to adopt.
- Markup enables reuse and repurposing.

Joaquim “px” Baptista

- 1989–1996, FCT/UNL: system administration, research in robotics and programming languages.
- 2015, consultant.

1. Desktop Publishing

Nice-looking text.

Typewriter

Owned one as a kid.

In 1962 Lockheed-Martin typed missile proposals in these, using STOP to plan pages and manage change.
Compucorp, 1981

- Matrix printers with built-in fonts, perforated rolls of paper.
- Dedicated "word processor" software.
- Proprietary hardware (Zilog Z80, hard-sector diskettes).
- Proprietary software (BASIC, Assembly, ZEBRA OS).

Innovative Compucorp sets out to battle Goliaths

The new model, priced at $US13,000, includes an "electronic dictionary" of one million words. It points out a misspelled word and then displays the correct spelling.

Daisy Wheel

WordStar, FCT 1985

- Usable on b/w text terminals.
- Stops printer to change the daisy wheel.
- More standard computers running CP/M.
- Survives on Linux as "pea".
- Images pasted on paper.
Technical Writers @ Lisbon — ISCTE, May 7th, 2015 — The 6th Report — 7 / 19

**EDITORIAL**

5. O CACTO — O introdutor de uma nova agenda editorial da área de informática. Em que se definiu a nova agenda editorial da área de informática.

**MS Word, FCT 1988**

- Word for MS-DOS edits documents larger than main memory.
- RTF is readable text.
- Generate (partial) RTF; then define styles.

**Apêndice D: Código do compilador**

```
Algorithm: transformacao do código na linguagem de programação

1. Definir as variáveis e funções
2. Definir a estrutura do código
3. Traduzir o código para a linguagem de programação
4. Testar o código
```

141 páginas formatadas automaticamente.

**iWeb, 2005–2013**

- Follow strict template with paragraph styles.
- Images as grey GIF or WMF files.
- Small to medium documents, 10-200 pages.

**MS Word, Altitude 1997–2000**

**Desktop Publishing Lessons**

- We can use simple tools in sophisticated ways.
- Office workers got convenience and flexibility. We almost lost the unwritten art of typography.
- We copy and paste to reuse, and to collaborate. An interchange format enables automation.
- Manual labor is expensive at volume. Gremlins. The print model does not fit the HTML model.
2. Plain text formats
Simple, human-readable structure.

TidBITS #100, 1992
- Free weekly electronic newsletter, since April 1990.
- The first 99 issues were written and distributed in the HyperCard stack format.
- We're now switching to the setext format...
- There will be special setext browsers to automate the task of searching, archiving and transforming bits of the encoded material into WYSIMOLWYG ("What You See Is More Or Less What You Get").

TWiki, Altitude 2002–
- Small notes took too long to publish on "XDoc".
- Adopted TWiki for "extra-documentation" notes.
- TWiki added collaboration and history.
- Adopted for Docteam notes, Agile process.
- Adopted by whole company in 2004 and 2005.
- There is still a learning curve. Requires discipline. Optional rich-text editor (HTML-based) is a mess.

Blogspot, 2003–2005
- Database of articles.
- Generates static HTML pages.
- Temporal order.
- Articles can be plain text.
- Minimal HTML markup, for images and links.
- Democratized online publishing for lesser geeks.

Docutils, FCT 2004–2008
- ReStructuredText (ReST), with formal grammar.
- Python parser, outputs HTML, PDF, others.
- Author in plain text editor.
- Navigate with Setext mode (BBEdit).
Docutils tricks

- Metadata.
- Comments.
- Commands.
- Include file.
- Raw LaTeX and HTML.

Index

Add convention and post-process.
`x` and `x:onlyx`

TextPattern, 2011–2012

- Database + PHP.
- Articles, images, documents, links, comments.
- Sophisticated site layout.
- Authors never got the metadata right.
- Textile allows sophisticated HTML article structure.

Dokuwiki, 2012–

- PHP wiki based on files, with history.
- Pages, files (images + documents).
- Nice editor helper buttons.
- Extension for blog, hard to use.
- Hard to create themes.

Pelican, 2014–

- Markdown, ReST, HTML, filesystem, Python, Jinja2.
- Customize for sub-articles, galleries of images.
- Several Markdown editors, none is best of all.
- Arbitrary metadata, easy to create themes.
- Source control with GIT.
Plain Text Lessons

- Accessible to non-geeks, but requires discipline. We can add conventions and post-process.
- A wiki enables complex collaboration. Metadata makes the filesystem a database.
- We must adapt to different outputs.
- Markdown is a mess yet beats HTML. Textile and ReST have little support.

LaTeX, FCT 1996–97

- Author in plain text editor. Semantic markup.
  Break large documents into parts.
- Obsolete parsing technology. Output in PDF only.

Semantic markup


LinuxDoc, FCT 1997–98

- Output as PDF, HTML, and TXT.
- Author in plain text editor. Extremely effective.
- A web of area documents and regular reports.
XDoc, Altitude 2000–4

- LinuxDoc to DocBook, too complex for authors?
- Custom XML DTD based on LinuxDoc.
- Proprietary XMetal editor. MSXML + XSLT + ext.
- Manyyear customization.
- Output Word+PDF (through Acrobat Distiller), HLP (Word + help compiler), HTML.
- Images are grayscale GIF or WMF.

XDoc tricks and issues

- Single-sourcing. Translation.
- Python: C# comments to XDoc.
- HTML generation time grew to 4h.
- O(document size * #parts).
- Documentation composed of 103 small documents.
- Fragile solution, no money for consultant.

DITA, Altitude 2005–

- Proprietary Syntax Serna editor, DITA built-in.
- Proprietary PDF rendered (XSL-FO).
- DITA Open Toolkit (XSLT + Java).
- Output PDF, HTML, CHM, Lost Word.
- Source control through SVN and TortoiseSVN.
- Images: GIF+SVG, some JPEG.
- Then, PNG and PDF.
DITA tricks

- Conventions instead of specialization.
- Python: C#/NET comments to DITA references.
- Python: GUI XML + DITA to DITA + XML tooltips.
- One-liners and small scripts. Makefiles.
- OEM by adding attributes and cover pages.

Training materials

- Convention for DITA slides.
- HTML slides with Slidy from W3C.
- Edit XSL-T and XSL-FO to improve PDF.
- New learning specialization.

Localization

- Dedicated technical localization manager.
- Visual Localizer, Swordfish.
- TMX, XLIFF.
- Python reuses TMX of GUI for documents.

Summary

<table>
<thead>
<tr>
<th>Cost</th>
<th>System properties</th>
<th>Author requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>Convenient and widespread</td>
<td>Requires extensive manual labor.</td>
</tr>
<tr>
<td>$</td>
<td>Basic text</td>
<td>Requires discipline.</td>
</tr>
<tr>
<td>$$$</td>
<td>Enables reuse and repurposing</td>
<td>Requires editor. Topic-based mindset.</td>
</tr>
</tbody>
</table>

Thanks!

pxQuim.com
Public notes

All participants received a questionary with the following questions:

• Ideas, doubts, comments, reflexions?
• What did you like the most?
• How could we improve? What could we do differently?

The participants were promised that their answers would be published in a final public report.

The following pages have the notes returned by 21 participants, transcribed or translated to English.

The anonymous notes correspond to participants that did not check the “publish?” box.

Daniel Som

Email? dlbsa@iscte-iul.pt

Comments? It is indeed important to draw the attention of programmers to the importance of documentation. It is important to teach them to “write”.

Like? Ascertain the importance of editors.

David Franco

Email? dgfoa@iscte-iul.pt

Comments? Rather interesting presentation, where the speaker is very competent and with extensive and vast knowledge of the theme addressed.

Like? The history and evolution of systems and applications.

Improve? Considering the audience, “Masters in Informatics Engineering”, the speaker could focus more on technical components, for example with practical demonstrations.

Anonymous #1

Improve?
• The tool may be limited, but the user can/should overcome the problems with sagacity.
• A short a very specific approach to tools, a positive point.
• Clear and perceptible slides.
Like?

- Time-based following and evolution of tools.
- Examples / events related with the tool addressed.

Improve? Short demonstrations of certain tools.

Anonymous #4

Comments? Having experience in functional analysis of systems and in requirements gathering processes, I did not get a clear notion of what I could use / consider to simplify and improve the writing of the documentation involved in these tasks.

Like? Historical and evolutionary context of the subject-matter presented.

Improve? Since the audience had some technical background and enjoys practical examples, you could illustrate one working application and do an “Hello world”.

Anonymous #5

Comments? Presentation too long.

Like? Ascertain the evolution of technologies over time.

Improve? Make this survey digital (make available online), avoiding the need to print and the work in gathering the information.

Anonymous #6

Comments? Presentation of specific applications, which help a specific problem. An area to explore to do the documentation.

Like? Presentation of new solutions that can be easily used to do some work.

Improve? If there was more time, you could present more examples.

Anonymous #7

Comments? Nothing of note.

Like? Nothing of note.

Improve? Less history lessons, more current usages and tools.

Anonymous #8

Comments? Markup and desktop publishing are more expensive. Plain text is practically free, but has little support and sophistication and requires discipline. Markup allows reuse and requires an editor.
Like? LaTeX and XML.

Anonymous #9

Comments? The importance of documentation associated with information systems is often relegated to the background, hindering the access to implemented functionality. Being aware of the importance of these tasks and the available tools is very relevant.

Like? The variety of editors shown.

Anonymous #10

Comments? I consider the professor approached the theme with many details which shows he has a deep knowledge and he’s passionated about Technical Writing.

However I think he should approach all these technologies slightly and become the presentation more dynamic.

In general, it was important to attend the presentation.

Anonymous #11

Comments? This served for future meditation about this issue. I had not even considered its existence until now.

Apparently there is not extensive solution. There are several tools and each one has positive and negative points.

Like? LinuxDoc.

Anonymous #12

Comments? A clear, simple, and compact presentation of the history of the technology related with technical writing. It looked easy when presented this way.

Some of aspectos referred can be relevant for:

• writing reports
• writing articles
• writing documentation
• a subject for further study and a subject for investigation.

Like? A good historical vision of the technology related with writing.

Improve? We missed a time for discussion.

Anonymous #13

Like? The part about LaTeX.
Anonymous #14

Comment? The content of the presentations slightly out of date. The presentation was not captivating and had no interaction.

Like? Historical context.

Improve? More dynamic presentations, with more interaction with the audience.
Institutional support

About EuroSIGDOC

EuroSIGDOC is an ACM SIGDOC European chapter.

SIGDOC is the Association for Computing Machinery's Special Interest Group (SIG) on the Design of Communication (DOC).

EuroSIGDOC is a group of researchers and practitioners wanting to pursue the SIGDOC mission in a European context.

Like SIGDOC, EuroSIGDOC focuses on the design of communication as it is taught, practiced, researched, and conceptualized in various fields, including technical communication, software engineering, information architecture and usability.

Since 2010, EuroSIGDOC sponsored the following events:

- OSDOC 2010 — Workshop Open Source and Design of Communication (eurosigdoc.acm.org/osdoc2010);
- OSDOC 2011 — Workshop Open Source and Design of Communication (eurosigdoc.acm.org/osdoc2011);
- OSDOC 2012 — Workshop Open Source and Design of Communication (eurosigdoc.acm.org/osdoc2012);
- OSDOC 2013 — Workshop Open Source and Design of Communication (eurosigdoc.acm.org/osdoc2013);
- ISDOC 2012 — Workshop Information Systems and Design of Communication (eurosigdoc.acm.org/isdoc2012);
- ISDOC 2013 — International Conference on Information Systems and Design of Communication (eurosigdoc.acm.org/isdoc2013)
- ISDOC 2014 — International Conference on Information Systems and Design of Communication (eurosigdoc.acm.org/isdoc2014)

Several seminars were sponsored by EuroSIGDOC (eurosigdoc.acm.org/seminars.html), and now the TWL (Technical Writers @ Lisbon).

— EuroSIGDOC Board
About APCOMTEC

APCOMTEC: uma associação interdisciplinar
Desde a sua criação, em 2006, que a APCOMTEC, Associação Portuguesa para a COMunicação TECnica, com sede na UA, tem vindo a promover e divulgar a prática profissional, formativa e de investigação em Comunicação Técnica (CT), em Portugal. Nos últimos anos, procurou dar a conhecer o seu trabalho e divulgar esta área, recente em contexto nacional, tanto através da formação, da organização de eventos, das redes sociais e da Newsletter

Missão e objetivos
A APCOMTEC tem por missão o desenvolvimento, a promoção e a representação da Comunicação Técnica em Portugal, bem como dos respetivos profissionais.
Dos objetivos dos atuais órgãos sociais fazem parte o diálogo próximo entre o meio académico e o meio empresarial, a promoção da interdisciplinaridade inerente à CT, nomeadamente com a Tradução, a Terminologia, a Engenharia Informática e a Divulgação de Ciência, bem como o fortalecimento da presença e o reconhecimento da CT a nível nacional e europeu. A APCOMTEC é associada da TCeurope – associação que representa os interesses da comunidade de Comunicação Técnica a nível europeu.

O que temos feito
Enquanto agente divulgador e mediador de experiências, conhecimento, informação, produtos e serviços sobre e de Comunicação Técnica, a APCOMTEC tem dinamizado eventos de informação e formação em CT, nomeadamente através das suas Jornadas e do Colóquio Internacional de Comunicação Técnica 2012.

Foram três as Jornadas já organizadas em diferentes pontos do país, desde 2011: no DLC/UA, sobre Comunicação Profissional e Design de Informação, na ESTGA, dedicada à Comunicação Profissional e Planeamento na Documentação Técnica, e no ISCAP, coorganizada com o Centro Multimédia de Línguas (CML), sob o tema “Comunicação Técnica: como traduzir negócios em sucesso”.

O objetivo destas Jornadas consistia em reunir especialistas e profissionais, na área da Comunicação Técnica (CT), e dar a conhecer o seu trabalho a futuros especialistas, indo assim ao encontro dos próprios objetivos da APCOMTEC.


O Pré-colóquio permitiu debater acerca da estreita relação entre a Comunicação Técnica, a Terminologia, a Tradução e a Engenharia Informática, que inequivocamente contribui para um desenvolvimento mais preciso, adequado e eficaz, assim como para a criação de documentação mais personalizada e intuitiva.

Quanto ao Colóquio TCeurope, o seu objetivo foi fornecer uma visão geral do estado-da-arte de um tópico tão vasto e desafiante como é o público-alvo em Comunicação Técnica, bem como explorar os diferentes e emergentes meios de comunicação aqui utilizados, trocar informação relativa à comunicação técnica e às suas aplicações, avaliar as vantagens e desvantagens dos diversos formatos de edição e produção, assim como as utilizações, as necessidades e as exigências provenientes da e-sociedade.

Este conjunto de eventos contribuiu certamente para o crescimento da associação, tanto a nível do número dos seus associados como da projeção que conseguiu dar a esta área recente do conhecimento, tendo-se este último facto refletido nos inúmeros contactos de qualidade que a APCOMTEC teve com as empresas e instituições, essencialmente a nível nacional.

Já a nível europeu, o esforço da associação em manter a ligação à TCeurope tornou-se particularmente profícuo aquando da organização conjunta do evento internacional antes mencionado, assim como nas reuniões de trabalho subsequentes, tendo a última acontecido em Bruxelas, em abril de 2013, onde a APCOMTEC esteve presente.
About ISCTE-IUL

ISCTE — University Institute of Lisbon (ISCTE-IUL) is a public university established in 1972. Pursuing teaching, research and community service activities, it plays a major role in educating qualified specialists and personnel, whose cultural, scientific and technical skills enable them to contribute to sustainable development both at the national and the global level. The strategic objectives of ISCTE — University Institute of Lisbon are: innovation, quality, internationalization and development of an entrepreneurial culture.

While preserving its public university nature, ISCTE — University Institute of Lisbon is currently one of the three Portuguese universities (along with the University of Porto and the University of Aveiro) which opted the Foundation Regime, the latter prescribing management according to private law.

With approximately 8500 students enrolled in undergraduate (52%) and postgraduate (48%) programs, 450 teachers and 220 non-teaching staff, ISCTE — University Institute of Lisbon is proud to be one of the most dynamic and innovative universities in the country. Facing high demand, the student vacancies at the ISCTE — University Institute of Lisbon have always been fully occupied.

- ISCTE-IUL is constituted by four schools:
  - ISCTE-IUL Business School (IBS)
  - School of Social and Human Sciences (ECSH)
  - School of Sociology and Public Policy (ESPP)
  - ISCTE-IUL School of Technology and Architecture (ISTA)

ISCTE — University Institute of Lisbon encourages students to fully exploit their potential, to develop their capability for initiative and flexibility and to complement their academic education with international experience, enabling them with the necessary skills to adapt to the needs of the global labour market. ISCTE — University Institute of Lisbon demonstrates a high rate of graduates’ employability and achieves the 100% rate in most of the courses. Its former students currently occupy positions of high responsibility in private companies, public institutions and governmental entities, which confirms not only the prestige of our institution, but also its teaching quality.

ISCTE — University Institute of Lisbon is a research university, with nine research centers evaluated by the Foundation for Science and Technology.

At community service level, the scholars and graduates of the ISCTE — University Institute of Lisbon have contributed to establishing multiple connections with private companies and public and civil society organizations. One of the most outstanding examples is the Institute for Management Development (INDEG), which employs activities of strong public recognition in the domains of education, postgraduate studies and research and community service in the areas of its jurisdiction.

In the domain of entrepreneurship, the research center AUDAX is nowadays a national reference as it has developed partnerships with various local authorities, business associations, COTEC and the Massachusetts Institute of Technology (MIT).