

IPOL Author Feedback Survey 2011

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Authors Survey

53 authors of IPOL articles, published or in process, were invited to answer a survey in November 2011. 22 answers were collected and analyzed with the LimeSurvey [4] web survey software. When the authors were involved in more than one article, they were asked to consider the article most representative of their IPOL experience when answering. We present a synthesis of these answers hereafter.

Profile of the Authors

Half of the authors who answered the survey were tenured researchers, and the other half were post-doc researchers or PhD students (table 1). They were involved in three kinds of articles, in similar proportions (table 2): the implementation and analysis of a classic algorithm previously presented by other authors in another paper, the implementation and analysis of one of their own algorithms previously presented by the same authors in another paper, or the implementation and analysis of an original algorithm.

The majority of the authors use the Linux operating system for their research tasks. Mac OS X could be merged with Linux in a POSIX category which is clearly the main computing environment for the authors, but Windows counts for more than 25% and cannot be ignored (table 3).

The C and C++ languages are the main programming environments for the authors. Others (less than 20%) use MATLAB and Python (table 4). As seen in later survey items, MATLAB and Python users could adapt to the requirement of a C/C++ source implementation of the algorithm 8).

No author uses the Internet Explorer browser 5). This is interesting, because this browser has some issues with standard compliance and some web technologies have been deliberately avoided in IPOL to be accessible from Internet Explorer users. If this tendency is confirmed in a larger survey, we could consider the essential visitors of the IPOL web site do not use Internet Explorer or can switch to another browser, and we could use more advanced web techniques supported by Firefox and Chrome¹.

However, there is a bias in these last three results because only IPOL authors were asked to answer. A larger survey targeting image processing researchers is needed to confirm these statistics.

master student	1
PhD student	7
post-doc	2
junior researcher	2
senior researcher	9

Table 1: author status

¹Users of “other” browsers were asked for details. They use the Rekonq and Epiphany browsers, both based on the standard-compliant rendering engine Webkit.

original algorithm	6
re-publication	7
classic algorithm	9

Table 2: type of article

Windows	6
Mac OS X	4
Linux	12

Table 3: operating system

C	8
C++	9
Python	1
MATLAB	3
other	0

Table 4: programming language

Internet Explorer	0
Firefox	8
Chrome	11
Opera	0
other	2

Table 5: web browser

Writing an Article

Writing the text of an IPOL article seems to require as much work as writing an article for a “classic” journal (table 6), and adapting a software to the IPOL requirement seems to double on average the time required for development (table 7), but we can observe large deviations in this table, probably connected to the individual proficiency of the authors in software development and the origin and characteristics of every software².

None of the requirements for the implementation of algorithms seems to be a serious issue for the authors (table 8). These requirements usually are no problem at all, or can be fulfilled with a small additional work. The two authors who felt the C/C++ requirement had an heavy impact on their work were used to develop in MATLAB or in the MegaWave [2] environment. Overall, the portability and library restrictions seem to have the most noticeable impact, but it appears to be manageable for the authors.

All the authors chose to publish their code under the GPL family of software licenses (GPL/LGPL/AGPL). Three authors declared that they have registered a patent for the algorithm they implemented and published.

× 0.25	4
× 0.5	5
× 1	8
× 2	1
× 4	2

Table 6: time to write an IPOL article, compared with a “classic” article

× 1	2
× 1.5	8
× 2	6
× 4	4
> × 4	1

Table 7: time to develop a software for IPOL, compared with a “classic” article

	A	B	C	D	E
source code	0	0	3	5	14
implementation in C/C++	1	1	2	2	16
usable in command-line	0	0	1	7	14
restrictions on file formats	1	0	1	10	10
detailed documentation	1	0	4	9	8
restrictions on libraries	1	2	2	10	6
portable implementation	0	2	4	11	5

Table 8: impact of the IPOL software guidelines on software development; A: lot of work extra work, B: some extra work, C: not an obstacle, D: minor impact, E: no impact

²It is interesting to observe that this overhead is compatible with the “rule of thumb” ×3 overhead estimated by Frederick P. Brooks for passing from a debugged program to a “programming product”, usable, testable and modifiable by anybody [1].

Satisfaction and Priorities

No author had a bad impression of IPOL and almost all rated their experience positive or very positive. Further work is needed to identify the reason for this satisfaction and the advantages of IPOL over other journals as perceived by the authors.

All the authors declared they would cite an IPOL article in a research paper and suggest colleagues to read IPOL materials, and more than 90% of them would write another article in IPOL and suggest colleagues to do the same.

Respondents were also asked to order a list of nine possible improvements, and their preferences were aggregated into a list of priorities³ (table 9).

The first priority is the improvement of the interface used to edit the articles. Other questions showed that the authors were dissatisfied with the wiki-like edition environment and the Markdown[3] syntax currently used for the articles, and they would prefer to send their articles instead, using LaTeX (tables 10 and 11).

However, there was a positive feedback on the principle of publishing the articles as HTML pages, and not much enthusiasm with the proposition to switch to a PDF format. The good option seems to receive the articles written in LaTeX and produce an HTML version from it.

We expected some criticism of the current review system, but its improvement is ranked low in the priority list. The majority of the authors are satisfied or very satisfied with the current documentation and speed of the review process. They would prefer a web-based review interface, but the demand is not as clear as for a new edition interface, with many uncertain respondents (tables 10 and 11).

- 1 a better interface to edit the articles
- 2 a better indexation in academic journals databases
- 3 some source code tools and libraries
- 4 a better system for the web demos
- 5 a better archive for the web demos
- . a better interface to handle the reviews of the articles
- . support for other kinds of data (sound, video)
- . improving the design of the IPOL web site
- . get some feedback from the readers for every article

Table 9: priorities for IPOL developments (the last 4 items were ranked too low for a meaningful order)

Conclusions

We can draw the following conclusions from this short survey. However, due to the small number of answers, they would need to be confirmed by further studies, and a survey on image processing researchers out of the IPOL community.

- the IPOL software requirements are not a serious obstacle for publication among the current authors;

³The winning choice was selected with a Condorcet method, then removed from the ballots, and the process was repeated to elect the next choices.

are you satisfied with...	Yes	.	.	.	No
the edition interface	6	1	4	6	5
the edition language	3	4	4	7	4
the article web format	10	9	2	1	0
the information about the review process	6	6	4	4	0
the speed of the review process	5	4	6	1	1

Table 10: satisfaction with the edition environment and review process

would you prefer...	Yes	Uncertain	No
a submission system	12	2	7
to use LaTeX	17	3	2
to publish as PDF	5	9	8
a web review interfaces	9	9	3

Table 11: propositions of alternative edition options and review tools

- more work is needed to publish in IPOL than to publish elsewhere, mainly for the software part, but this doesn't affect the author's overall satisfaction;
- the priority must be a reform of the edition/submission process to accept LaTeX input and abandon the wiki-like model, but publishing the articles in PDF is not enough;
- IPOL needs to be actively inserted in academic publication databases.

References

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