

Open Access

Peter Schwabe

Radboud University, Nijmegen, The Netherlands



June 5, 2017

Summer school on real-world crypto and privacy
Šibenik, Croatia

"THE COUNCIL OF THE EUROPEAN UNION

...

3. STRESSES that open science entails amongst others open access to scientific publications and optimal reuse of research data, citizens science, and research integrity;

"THE COUNCIL OF THE EUROPEAN UNION

...

3. STRESSES that open science entails amongst others open access to scientific publications and optimal reuse of research data, citizens science, and research integrity;

...

6. AGREES that the results of publicly funded research should be made available in an as open as possible manner

"THE COUNCIL OF THE EUROPEAN UNION

...

3. STRESSES that open science entails amongst others open access to scientific publications and optimal reuse of research data, citizens science, and research integrity;

...

6. AGREES that the results of publicly funded research should be made available in an as open as possible manner

...

9. BELIEVES that optimal access and reuse of the results of scientific work can be enhanced if researchers or their employers retain the copyright on their scientific works;

"THE COUNCIL OF THE EUROPEAN UNION

...

3. STRESSES that open science entails amongst others open access to scientific publications and optimal reuse of research data, citizens science, and research integrity;

...

6. AGREES that the results of publicly funded research should be made available in an as open as possible manner

...

9. BELIEVES that optimal access and reuse of the results of scientific work can be enhanced if researchers or their employers retain the copyright on their scientific works;

...

12. AGREES to further promote the mainstreaming of open access to scientific publications by continuing to support a transition to immediate open access as the default by 2020"

—Brussels, 17 May 2016

“A great deal of time in research is spent on doing the same things over and over again by different groups and people. In part this redundant work is necessary to understand and verify previous results and techniques, but still a significant amount of time is wasted simply because results are not publicly available or not usable because of copyright restrictions. This wasted time could be saved if all results (including software) of all publicly funded research automatically entered the public domain.”

“A great deal of time in research is spent on doing the same things over and over again by different groups and people. In part this redundant work is necessary to understand and verify previous results and techniques, but still a significant amount of time is wasted simply because results are not publicly available or not usable because of copyright restrictions. This wasted time could be saved if all results (including software) of all publicly funded research automatically entered the public domain.”

—me, Eindhoven, 24 January 2011

OA Advantages

For the community

- ▶ Reduce effort for others to find/obtain papers
- ▶ Make your results verifiable
- ▶ Make it easier for others to improve on your results
- ▶ Advance the field faster!

OA Advantages

For the community

- ▶ Reduce effort for others to find/obtain papers
- ▶ Make your results verifiable
- ▶ Make it easier for others to improve on your results
- ▶ Advance the field faster!

For yourself

- ▶ People will read your papers :-)

OA Advantages

For the community

- ▶ Reduce effort for others to find/obtain papers
- ▶ Make your results verifiable
- ▶ Make it easier for others to improve on your results
- ▶ Advance the field faster!

For yourself

- ▶ People will read your papers :-)
- ▶ People will cite your papers

OA Advantages

For the community

- ▶ Reduce effort for others to find/obtain papers
- ▶ Make your results verifiable
- ▶ Make it easier for others to improve on your results
- ▶ Advance the field faster!

For yourself

- ▶ People will read your papers :-)
- ▶ People will cite your papers
- ▶ People will talk to you about your papers

OA Advantages

For the community

- ▶ Reduce effort for others to find/obtain papers
- ▶ Make your results verifiable
- ▶ Make it easier for others to improve on your results
- ▶ Advance the field faster!

For yourself

- ▶ People will read your papers :-)
- ▶ People will cite your papers
- ▶ People will talk to you about your papers
- ▶ People will improve your papers

OA Disadvantages

- ▶ Hard to do for some high-ranking journals
- ▶ Can be expensive
- ▶ Can be tedious

Green, Hybrid, and Gold OA

Green OA

- ▶ Self-archived papers, institutional or thematic
- ▶ Examples: arXiv, IACR's eprint

Green, Hybrid, and Gold OA

Green OA

- ▶ Self-archived papers, institutional or thematic
- ▶ Examples: arXiv, IACR's eprint
- ▶ Disadvantage: Not used consistently by all researchers
- ▶ Main reason: Copyright forms from publishers

Green, Hybrid, and Gold OA

Green OA

- ▶ Self-archived papers, institutional or thematic
- ▶ Examples: arXiv, IACR's eprint
- ▶ Disadvantage: Not used consistently by all researchers
- ▶ Main reason: Copyright forms from publishers

Gold

- ▶ Articles published in open-access journals
- ▶ Authors pay an “article processing fee” (APC)
- ▶ Publisher makes article openly available for everybody

Green, Hybrid, and Gold OA

Green OA

- ▶ Self-archived papers, institutional or thematic
- ▶ Examples: arXiv, IACR's eprint
- ▶ Disadvantage: Not used consistently by all researchers
- ▶ Main reason: Copyright forms from publishers

Gold

- ▶ Articles published in open-access journals
- ▶ Authors pay an “article processing fee” (APC)
- ▶ Publisher makes article openly available for everybody

Hybrid

- ▶ Similar to Gold, but OA only as an option
- ▶ Publisher makes part of the revenue also through subscriptions

OA Howto

- ▶ In crypto, most papers are in LNCS volumes
- ▶ Springer copyright form allows you to put your papers online

OA Howto

- ▶ In crypto, most papers are in LNCS volumes
- ▶ Springer copyright form allows you to put your papers online
- ▶ PETS and FSE moved to gold-open-access journals (PoPETS and ToSC)

<https://www.iacr.org/transactions/tosc/>

OA Howto

- ▶ In crypto, most papers are in LNCS volumes
- ▶ Springer copyright form allows you to put your papers online
- ▶ PETS and FSE moved to gold-open-access journals (PoPETS and ToSC)
<https://www.iacr.org/transactions/tosc/>
- ▶ IACR is running <https://eprint.iacr.org>
- ▶ Put your papers there

OA Howto

- ▶ In crypto, most papers are in LNCS volumes
- ▶ Springer copyright form allows you to put your papers online
- ▶ PETS and FSE moved to gold-open-access journals (PoPETS and ToSC)
<https://www.iacr.org/transactions/tosc/>
- ▶ IACR is running <https://eprint.iacr.org>
- ▶ Put your papers there
- ▶ Some journals have open-access options, for funding:
 - ▶ Check whether your project has money (e.g., H2020): *“... publishers often charge so-called "article processing charges" (APC). These costs are eligible for reimbursement during the duration of the action as part of the Horizon 2020 grant”*
 - ▶ Check whether your university has special OA funding
- ▶ Don't underestimate your negotiation position
- ▶ Don't underestimate the value of open access (see advantages before)

Publishing software

- ▶ Quite a few crypto software-implementation papers
- ▶ Also other papers that use or describe useful software

Publishing software

- ▶ Quite a few crypto software-implementation papers
- ▶ Also other papers that use or describe useful software
- ▶ Make this software available!

Publishing software

- ▶ Quite a few crypto software-implementation papers
- ▶ Also other papers that use or describe useful software
- ▶ Make this software available!
- ▶ Place a link to the software in your paper
- ▶ Document your software

Publishing software

- ▶ Quite a few crypto software-implementation papers
- ▶ Also other papers that use or describe useful software
- ▶ Make this software available!
- ▶ Place a link to the software in your paper
- ▶ Document your software
- ▶ Test the documentation and software package on a completely clueless colleague
- ▶ Improve until the most clueless colleague is able to reproduce your results

Publishing software

- ▶ Quite a few crypto software-implementation papers
- ▶ Also other papers that use or describe useful software
- ▶ Make this software available!
- ▶ Place a link to the software in your paper
- ▶ Document your software
- ▶ Test the documentation and software package on a completely clueless colleague
- ▶ Improve until the most clueless colleague is able to reproduce your results
- ▶ Submit high-speed crypto software to eBACS:
<http://bench.cr.yp.to>

Publishing hardware

- ▶ Essentially the same as for software
- ▶ Provide a walk-through Howto to make your implementation work

Publishing hardware

- ▶ Essentially the same as for software
- ▶ Provide a walk-through Howto to make your implementation work
- ▶ Similar for *software* implementations on special hardware
- ▶ Hopefully useful example:
<http://munacl.cryptojedi.org/curve25519-cortexm0.shtml>

Summary

- ▶ Make your papers (book chapters, books, theses) available online

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online
- ▶ Publish all the things! (e.g., also side-channel traces etc.)
- ▶ Be nice to your readers

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online
- ▶ Publish all the things! (e.g., also side-channel traces etc.)
- ▶ Be nice to your readers
- ▶ Make sure that those resources can be found:
 - ▶ Use long-living URLs
 - ▶ Use document IDs? <https://cr.yp.to/bib/documentid.html>

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online
- ▶ Publish all the things! (e.g., also side-channel traces etc.)
- ▶ Be nice to your readers
- ▶ Make sure that those resources can be found:
 - ▶ Use long-living URLs
 - ▶ Use document IDs? <https://cr.yp.to/bib/documentid.html>
- ▶ Read copyright forms

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online
- ▶ Publish all the things! (e.g., also side-channel traces etc.)
- ▶ Be nice to your readers
- ▶ Make sure that those resources can be found:
 - ▶ Use long-living URLs
 - ▶ Use document IDs? <https://cr.yp.to/bib/documentid.html>
- ▶ Read copyright forms
- ▶ Don't sign forms that you are not comfortable with

Summary

- ▶ Make your papers (book chapters, books, theses) available online
- ▶ Make your software available online
- ▶ Make your hardware available online
- ▶ Publish all the things! (e.g., also side-channel traces etc.)
- ▶ Be nice to your readers
- ▶ Make sure that those resources can be found:
 - ▶ Use long-living URLs
 - ▶ Use document IDs? <https://cr.yp.to/bib/documentid.html>
- ▶ Read copyright forms
- ▶ Don't sign forms that you are not comfortable with
- ▶ Don't sign *anything* that you are not comfortable with

Questions?

peter@cryptojedi.org