



Open Access Publishing in Aerospace – Opportunities and Pitfalls

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Abstract

The first Open Access (OA) peer reviewed online journals in aerospace were all established after 2007. Still today more and more OA aerospace journals get started. Many publishers are located in less developed countries. The benefits of OA publishing are undisputed in the academic community, but there is disagreement if the new publishers can work to required standards. The current situation is evaluated based on an Internet review. OA journals in aerospace are listed with their major characteristics. Well known OA publishers charge high publication fees, whereas less known OA publishers tend to charge relatively low fees. All publishers need to be carefully checked for their level of rigor in peer review and their offered service in the scholarly publication process. Authors should evaluate OA journals and publishers against provided lists of criteria before submitting their work.

1 Introduction

1.1 Objective

Intension is to explain the background and to systematically present possibilities for research-

ers in aerospace to have their work published on the Internet so that it can be read without access fees by anybody. Such Open Access (OA) publishing is growing at fast pace. Many models of OA exist and will be presented and discussed to enable subsequent application to OA publishing in aerospace.



Fig 1: Open Access Logos [2], [14]

1.2 Definition of Basic Terms

This contribution is about publishing an academic paper in contrast to publishing an academic books or a thesis. Several terms are defined in this context.

Open Access (OA) means “to provide the public with unrestricted, free access to scholarly research – much of which is publicly funded. Making the research publicly available to everyone – free of charge and without most copyright and licensing restrictions”. [1] The Budapest Open Access Initiative [1] recommends establishing the “goal of achieving Open Access

as the default method for distributing new peer-reviewed research”. Open Access Initiatives are often marked with a logo as presented in Fig 1.

Publishing means “the activity of making information available” [3] and includes everything from development to distribution (e.g. in paper, online or both in parallel), including e.g. copy-editing, graphic design, production, and marketing.

Academic Publishing (of scholarly journals) is peer reviewed publishing. [4] An academic publisher has to be able to manage the peer review process and will index his journals.

Publication has two meanings [5]:

(a) *legal meaning*: anything that is made public,
 (b) *scientific meaning*: only what is meeting the quality standards and acceptance for publication by a peer reviewed journal or peer reviewed proceedings. Journals will only accept submitted papers not having been published before (according to scientific meaning b).

2 Self-Archiving

Self-archiving is a possibility to make research results public on the Internet independent of a publisher. Self-archiving is sometimes also called *Green OA* and means “to deposit a digital document in a publicly accessible website” [6]. Self-archiving does not include anything else as to make the content available online. It is done for the purpose of maximizing the paper’s accessibility, usage and citation impact. [7] The paper can be uploaded

- to the *website of the researcher*,
- to the *website of an organization*, or better
- to a *repository* [8].

Self-archiving is done in parallel to traditional academic publishing. A publisher with established reputation is used for providing the peer review process. The paper is made public in a print journal (with limited visibility). The author uses the possibilities granted by the rules of the publisher for self-archiving and enhanced visibility.

Possibilities for self-archiving granted by the publisher depending on **what** is allowed to go online [9]:

- *Green OA*
 - preprint (paper before the review process)

- postprint (paper after the review process) or publisher-generated PDF file
- *Blue OA*
 - postprint (after review process) or publisher-generated PDF
- *Yellow OA*
 - preprint (before review process)
- *White OA*
 - Archiving not formally supported by the publisher.

Possibilities for self-archiving granted by the publisher depending on **when** it is allowed to go online:

- *instant self-archiving*: no time delay required
- *delayed self-archiving* (Delayed OA). Typical required elapsed times between journal publication and self-archiving are 6, 12 or even 24 month.

Repository is a systematic online collection of digital documents with “all stages of research from pre-refereed preprint, through successive revisions, till the refereed postprint” [10] and if (in rare cases) allowed for upload also with publisher-generated PDF files.

Eprints are either preprints or postprints.

3 OA Conference Publications

An Open Access conference publication is a publication based on a conference presentation or poster. The conference offers

- a peer-review process for the papers and
- to publish the papers online after the conference without access restrictions.

One example of such a conference in aerospace is the “Congress of the International Council of the Aeronautical Sciences” (ICAS) [11] offering paper review and uploading. However, most aerospace conferences seem not to fulfill both criteria. In that case, it is possible to go to a suitable journal after the conference for publication. The journal (OA journal or classic journal) will accept the proposed paper, because – so far without a review process or without wider dissemination – the paper is not considered a scientific publication yet. Conference publications are not further considered here.

4 Business Models

Business models have been established for OA and for traditional journals and their publishers:

- **OA journals** [12], [13], [2]:
 - *subsidized* (paid by: academic institution or learned society; eventual in most cases by the government)
 - *authors charged* (paid by: authors or their funding agencies; eventual in most cases by the government)
 - *institutional membership* (institutions pay a flat rate for a certain volume of publications of their members)
 - *advertisement on website*
- **Traditional journals:**
 - *subscription-based* (paid by libraries, eventual by the government)
 - *pay per view* (paid by readers for download of a single paper)
 - *Hybrid OA* (paid by author for the benefit that readers do not need to pay per view for his/her paper)
 - *advertisement in journal.*

OA and traditional journals tend to combine some or all of the listed options in their category to maximize revenues.

OA means **free access for the reader** to the papers, but the authors may need to pay instead. The subsequent classification looks at different **author payment models** depending also on the amount of delay (embargo) requested by the publisher [14]:

- Free OA (no payments by authors)
- Gold OA (*moderate payments* by authors)
- Hybrid OA (often *expensive payments* by authors)
- Delayed OA (embargo period, often no payments by authors)

Moderate payments: normally around 1000 €, but vary from 500 € to 2500 €.

Expensive payments: around 3000 \$.

Linköping University says: “Virtually all the major subscription-based publishers offer a scheme whereby you can pay them \$3000 (or thereabout) to make your article freely available in their otherwise subscription-based operation. As an author, you often receive an offer for this service just after your paper has been accepted

for publication. We strongly do not recommend this option.” [15]

5 Open Access Spectrum

The Open Access Spectrum [16] has been defined by the organizations SPARC [17], PLOS [18] and OASPA [19] to answer the question “How open is it?” (see logo in Fig. 3 and definitions in Fig 4). Together they point out: “Open Access is a means of disseminating scholarly research that breaks from the traditional subscription model of academic publishing. It has the potential to greatly accelerate the pace of scientific discovery, encourage innovation, and enrich education by reducing barriers to access. Open Access shifts the costs of publishing so that readers, practitioners, and researchers obtain content at no cost. However, Open Access is not as simple as ‘articles are free to all readers’. Open Access encompasses a range of components such as readership, reuse, copyright, posting, and machine readability. Within these areas, publishers and funding agencies have adopted many different policies, some of which are more open and some less open. In general, the more a journal’s policies codify immediate availability and reuse with as few restrictions as possible, the more open it is. Journals can be more open or less open, but their degree of openness is intrinsically independent from their: Impact, prestige, quality of peer review, peer review methodology, sustainability, effect on tenure & promotion, article quality.”

The Open Access Spectrum embraces six core components with their most open characteristics they are:

1. *Reader Rights:* Free readership rights to all articles immediately upon publication.
2. *Reuse Rights:* Creative Commons License CC BY (see Chapter 6).
3. *Copyrights:* Author holds copyright with no restrictions.
4. *Author Posting Rights:* Author may post any version to any repository or website.
5. *Automatic Posting:* Journals make articles automatically available in trusted third-party repositories (e.g. PubMed Central) immediate upon publication.

6. *Machine Readability*: Article full text, metadata, citations & data, including supplementary data, provided in community machine readable standard formats through a community standard API or protocol.

The first of these six open access components is at the heart of OA, but also the second component “reuse rights” is heavily demanded already in form of “CC BY”.

6 Creative Commons License CC BY

Creative Commons [20] – in short CC – has evolved as the accepted free provider of reuse right licenses. The most liberal reuse license is CC BY (except from CC0). CC BY [21] stands for

“You are free:

- to Share – to copy, distribute and transmit the work,
- to Remix – to adapt the work,
- to make commercial use of the work.

Under the following conditions:

- Attribution – You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work)”

Its logo is given in Fig 2.



Fig 2: Creative Commons CC BY logos [22]

Research funders like RCUK [23] demand CC BY. If they have paid the research, they should have the right to dictate that everyone should ultimately benefit from it. Organizations of librarian like SPARC-Europe [24] strongly support CC BY. They have an interest to foster the widest possible information exchange. The Directory of Open Access Journals (DOAJ) [25] inspires the use [26]. Objection could come from those authors who have written their paper in their own time and have paid publication fees from their own pocket and do not want to see others to commercially exploit their work. Creative Commons offers for them e.g. CC BY-NC [27] and CC BY-NC-SA [28], but these licenses are not considered a “Free Culture License”.

7 Current Debate

Without doubt, a paradigm shift in the business model of academic publishing (see Chapter 4) got started in the US [29], in Europe [30] and beyond. That ultimately means that not all of the traditional publishers may survive, if they can not quickly enough adapt. On the other hand the “gold rush” in starting new OA journals has not always brought quality. Sound and established processes have yet to be found by the newcomers. Repositories are increasing at a rapid rate [8]. For this reason at the heart of the debate [31], [32] is the fear of traditional publishers to loose market share and profit.

The open access newcomers are under heavy observation. Two possibilities exist:

- **To black-list** journals and publishers who do not perform up to established standards. “Beall’s List of Predatory Publishers 2013” [33] is the current prominent blacklist with 242 OA publishers and 126 OA journals listed. A less prominent black list is [34] with only 7 OA journals listed (but also linking to [33]).
- **To white-list** journals and publishers who have undergone a minimum check by a respected organization and are listed with this organization. If an open access journal or publisher is listed in the Directory of Open Access Journals (DOAJ) [25] it is a first good sign. DOAJ lists currently almost 10000 OA journals. If the publisher is listed as a member of Open Access Scholarly Publishers Association (OASPA) [19] it has undergone an even more detailed check. OASPA lists currently (only) about 40 OA professional publishing organizations.

8 Pros and Cons of Blacklisting versus Whitelisting Publishers and Journals

The pros and cons of blacklisting and whitelisting have been discussed in [35].

“Beall says ... he is sceptical about whether a white list would be able to keep up with the surge of new publishers, and believes that his blacklist provides more immediate warning” [35].

“ ‘One of the major weaknesses of Jeffrey Beall's methodology is that he does not typically engage in direct communication with the journals that he has classified as predatory,’ says Paul Peters, chief strategy officer at Hindawi Publishing Corporation, based in Cairo, and president of the Open Access Scholarly Publishers Association (OASPA), based in The Hague, the Netherlands. A set of Hindawi's journals appeared on a version of Beall's list because he had concerns about their editorial process, but has since been removed. ‘I reanalysed it and determined that it did not belong on the list,’ he [Beall] says.” [35]

“ ‘Some [publishers] are embarrassingly ... amateurish, but predatory is a term that, I think, implies intent to deceive,’ says Jan Velterop, a former science publisher at Nature Publishing Group” “Damage could be done if ‘a damning verdict is given to otherwise honest, though perhaps amateurish, attempts to enter the publishing market’, he says.” [35]

“Publishers in developing countries and emerging economies are at particular risk of being unfairly tarred by Beall's brush, critics say. Many open-access publishers are springing up in India and China, for example, where swelling researcher ranks are creating large publishing markets.” [35]

“ ‘It is important that criteria for evaluating publishers and journals do not discriminate [against] publishers and journals from other parts of the world,’ says Lars Bjørnshauge, managing director of the Directory of Open Access Journals (DOAJ), based in Copenhagen, which lists open-access journals that have been reviewed for quality. ‘New publishing outfits may legitimately use aggressive marketing tactics to recruit authors, and they may have yet to polish their websites, editorial boards and peer-review procedures.’ ” [35]

“Bjørnshauge feels that the entire problem needs to be kept in perspective. He estimates that questionable publishing probably accounts for fewer than 1 % of all author-pays, open-access papers – a proportion far lower than Beall's estimate of 5 ... 10 %. Instead of relying on blacklists, Bjørnshauge argues, open-access associations such as the DOAJ and the OASPA should adopt more responsibility for policing

publishers. He says that they should lay out a set of criteria that publishers and journals must comply with to win a place on a 'white list' indicating that they are trustworthy.” [35]

9 Criteria for OA Publishers and Journals

9.1 Criteria of the Directory of Open Access Journals (DOAJ)

To be (white) listed as journal on DOAJ, criteria as follows have to be met [25] (summary):

- Open Access Journal: We define open access journals as journals that use a funding model that does not charge readers or their institutions for access. From the BOAI definition of "open access", we support the rights of users to "read, download, copy, distribute, print, search, or link to the full texts of these articles" as mandatory for a journal to be included in the directory.
- Registration: Free user registration online is acceptable.
- Open Access without delay (e.g. no embargo period).
- Research Journal: Journals that report primary results of research or overviews of research results to a scholarly community.
- Periodical: A serial appearing, or intending to appear, indefinitely at regular intervals and generally more frequently than annually, each issue of which is numbered or dated consecutively and normally contains separate articles, stories, or other writings. The journal should have an ISSN (International Standard Serial Number). Online journals should have an eISSN.
- Content: a substantive part of the journal should consist of research papers. All content should be available in full text.
- Quality: For a journal to be included it should exercise quality control on submitted papers through an editor, editorial board and/or a peer-review system. Describe the process on the web site.
- Metadata: Journal owners are encouraged to supply article metadata.

- Necessary information: The journal's aims and scope, presentation of the editorial board, author guidelines, description of the quality control system and information about Open Access, information about the specific journal should be available on its own URL.
- Commercials: If for financial reasons it is necessary to have commercials on the journal's web site make sure the commercial is not in any way offensive or includes information that could decrease the credibility of the journal. Please note that blinking and/or moving objects can distract a reader.
- Transparency: Be as transparent as possible when presenting your editorial board. Provide:
 - a contact address for the journal,
 - the affiliation of the editorial board members,
 - the contact addresses to the editorial board members,
 - add a link to the web site where the specific editorial board member is presented by his or her employing institution.
- Author guidelines: Provide
 - information on journal charges, handling fees, publication fees with the amount clearly stated,
 - a CC-license for the journal papers; the SPARC Europe Seal is given for a journal with CC BY and provision of meta-data,
 - information about copyright – please note the importance of informing authors about whether the journal will be the copyright holder after publication of an article or if the copyright remains with the author(s),
 - description of how to submit an article,
 - a detailed style guide.
- The publisher's website demonstrates that care has been taken to ensure high standards of presentation.
- Published articles can be read without the requirement for registration of any kind.
- Full contact information is visible on the website and includes a business address.
- Clear and detailed Instructions for Authors are present and easily located from the homepage. The guidelines include details of the Open Access policy for this publication.
- All articles shall be subjected to some form of peer-based review process. This process and policies related to peer-review shall be clearly outlined on the journal or publisher web site.
- Journals shall have editorial boards or other governing bodies of sufficient size to support the journal, whose members are recognized experts in the field(s) that constitute the scope of the publication.
- Any fees for publishing in the journal are clearly displayed. If there are no charges to authors this should also be highlighted.
- The journal website and published articles, including PDF, should clearly show the licensing policy of the journal. Ideally, the policy should be equivalent to CC BY (also CC BY-NC is acceptable).
- The publisher should not indulge in any practices or activities that could bring the Association or open access publishing into disrepute.
- Any direct marketing activities publishers engage in shall be appropriate and unobtrusive.
- Where appropriate, OASPA will request information about the legal status of the publishing organization, for example, whether it is a privately-owned or public company, a not-for-profit organization or a charity. OASPA will request company registration information.
- Demonstration of the following is also desirable: A&I services that index the journal(s), availability of DOIs for published content, COPE membership [36] and archiving policy.

9.2 Criteria of the Open Access Scholarly Publishers Association (OASPA)

To be (white) listed as publisher with the OASPA, criteria as follows have to be met [19] (summary):

9.3 Criteria of LiU Electronic Press for Evaluating a Journal

Before publishing it is important to determine whether a journal is serious or not writes Linköpings University Electronic Press [37]. It is important to check if a publication in the journal under investigation "counts" in an academic evaluation exercise in the author's home country. This includes checking the journal being appropriately indexed. The following criteria are worth checking in addition:

- Is the publisher a member of OASPA?
- Is the journal listed in the Director of Open Access Journals (DOAJ)?
- Who is on the editorial committee?
- Who produces the journal?
- Do they give clear contact information?
- Is there a clear and detailed description of the peer-review process?
- Is there regular publishing of articles, no periods of inactivity?
- Are articles found by Google, when searching by using their full titles?
- Is transfer of copyright required? (Should not be required)
- Is the right to parallel publishing (preferably with an embargo period of 6 months or less) retained? (Should be retained)
- Are DOIs (Digital Object Identifier) assigned to all articles?
- Do well established authors in the field publish in the journal?

Also [35] includes "A checklist to identify reputable publishers" which however does not give new criteria compared to the criteria listed so far. Also [35] sees DOAJ and OASPA as the two organizations that check OA journals respectively OA publishers.

9.4 Criteria to Put a Publisher on Beall's Black List

There are many things a publisher can do wrong. Accordingly, Beall's "Criteria for Determining Predatory Open-Access Publishers" [38] is quite long and will not be reproduced here in full. Some (interesting) criteria not mentioned before are selected to illustrate the

pitfalls that publishers and authors should watch out for:

1. The publisher depends on author fees as the sole and only means of operation with no alternative, long-term business plan for sustaining the journal through augmented income sources.
 2. The publisher provides insufficient information or hides information about author fees, offering to publish an author's paper and later sending a previously-undisclosed invoice.
 3. The publisher sends spam requests for peer reviews to scholars unqualified to review submitted manuscripts.
 4. The publisher dedicates insufficient resources to preventing and eliminating author misconduct, to the extent that the journal or journals suffer from repeated cases of plagiarism, self-plagiarism, image manipulation, and the like.
 5. The publisher asks the corresponding author for suggested reviewers and the publisher subsequently uses the suggested reviewers without sufficiently vetting their qualifications or authenticity.
 6. Operate in a Western country chiefly for the purpose of functioning as a vanity press for scholars in a developing country.
 7. Do minimal or no copyediting.
 8. Have a "contact us" page that only includes a web form, and the publisher hides or does not reveal its location.
- "The following practices are considered to be reflective of poor journal standards ..., while they do not equal predatory criteria" [38]:
9. The publisher copies "authors guidelines" verbatim (or with minor editing) from other publishers.
 10. The publisher lists insufficient contact information, including contact information that does not clearly state the headquarters location or misrepresents the headquarters location (e.g., through the use of addresses that are actually mail drops).
 11. The publisher publishes journals that are excessively broad (e.g., Journal of Education) in order to attract more articles and gain more revenue from author fees.

12. The publisher requires transfer of copyright and retains copyright on journal content. Or the publisher requires the copyright transfer upon submission of manuscript.
13. The publisher has poorly maintained websites, including dead links, prominent misspellings and grammatical errors on the website.
14. The publisher engages in excessive use of spam email to solicit manuscripts or editorial board memberships.
15. The publishers' officers use email addresses that end in .gmail.com, yahoo.com some other free email supplier.
16. The publisher includes links to legitimate conferences and associations on its main website, as if to borrow from other organizations' legitimacy, and emblazon the new publisher with the others' legacy value.
17. The publisher displays prominent statements that promise rapid publication and/or unusually quick peer review.
18. The publisher uses text on the publisher's main page that describes the open access movement and then foists the publisher as if the publisher is active in fulfilling the movement's values and goals.
19. None of the members of a particular journal's editorial board have ever published an article in the journal.

These criteria should suffice to illustrate how publishers can fall in traps and should give an overview of how badly some publishers are organized apparently. However, it seems not clear how to apply some criteria in practice to black-list publishers:

1. Every publisher with a business model base only on author fees is black-listed? How to obtain the business plan from the publisher?
6. To distinguish between "Western country" and "developing country" is imprecise. What about Japan? The term "vanity press" seems to be used in a subjective way. Possible questions for a distinction could be based on: Is vanity press "self-publishing" in contrast to "self-archiving"? [5] Is vanity press defined as "without peer-review"? [10] Is vanity press based on "correlation between publishers' quality standards and the

fees charge"? Will positive or negative correlation cause black-listing? [39]

7. Business models can vary, including extensive copyediting in the publication fee, charging for copyediting in addition, handing over this task to another company specialized in this field. Hence more details need to be included in a verdict on this point.
11. To establish broad-spectrum journals seems to be common accepted practice. PLOS ONE's publication criteria state "We welcome submissions in any discipline" [40]. Similarly, SAGE Open spans "the full extent of the social and behavioral sciences and the humanities" [41].
14. It is not defined what "spam emails" are. Commercial electronic mail messages are legal e.g. in the USA according to the CAN-SPAM Act of 2003 [42] if they observe unsubscribe, content and sending behavior compliance.
16. What may be allowed for a "white" publisher seems not to be allowed for a "black" publisher. A more precise statement would be: Including links to other organizations should (preferably) require that these organizations also link back to the publisher.
17. Ok, but some traditional publishers should be blamed for dragging on publication in a way that should not be tolerated.
18. Here the evaluation will be subjective. Some criteria may show a "Western" bias:
10. A publisher showing its (say) Indian origin will be blamed for being Indian. An Indian publisher trying to hide its origin will be blamed for not being transparent. This is a catch-22.
12. Grammar and spelling: Only English language journals seem to be investigated. Journals published by employees with English not a native language are treated like journals published by native English employees. However, journals publishing in a language other than English do not run the danger of being blacklisted, they are not even considered.

15. This may be normal in “developing countries”.

These remarks do not attempt to be a full criticism of [38], but may show how problematic it is to come to a verdict. It may be asked, if [38] has been applied only to publishers already in focus to produce Bell’s list [33]. Applying [38] also to established publishers may reveal more candidates for the list. Applying [38] to Springer’s “European Transport Research Review” would probably reveal “predatory behavior” according to criteria 2 (fees, see below). Yet Springer is not listed in [33]. The journal writes: “Manuscripts that are accepted for publication will be checked by our copyeditors for spelling and formal style. This may not be sufficient if English is not your native language and substantial editing would be required.” [43] The journal links to an external service which is charging extra. Is this “predatory behavior” according to criteria 7 (minimal or no copyediting)?

After all, it is not made public how many and which of the criteria a black-listed publisher was found guilty of.

10 Review of Open Access Aerospace Journals

Listed are primarily journals that are only dedicated to aerospace. Given is the journal name and with web link to the journal. The publisher’s origin is given according to the web page information and from the registration of the domain name. If the domain name information is hidden this is indicated (“hidden”). White or black listings are indicated of the publisher. If the publisher and the journal is listed on DOAJ three numbers are given (number of journals listed / number of articles listed / number of articles of the aerospace journal listed). If only one journal exists two numbers are given. Information is provided, if ISSNs are assigned for the journal, if DOIs are assigned to articles of the publisher, in which format the articles are presented, reuse and copyright details according to the publisher’s information. Listed is further how many articles have been published in the journal and in how many databases the journal is indexed. Since all these journals are quite

new, none has an impact factor. A subjective indication is given about the web page appearance with regards to clear design, structure and necessary information for an OA journal (according to Chapter 9).

International Journal of Aerospace Engineering

Hindawi Publishing Corporation
<http://www.hindawi.com/journals/ijae>
 Origin: Egypt
 Started: 2008
 Fees: 600 USD
 Publisher and journal white-listed:
 DOAJ (SPARC Europe Seal) (405/73000/79), OASPA
 Publisher black-listed: none
 ISSN, eISSN, DOI, PDF, HTML, CC BY, copyright ret.
 Articles: 84 (\approx 14 per year)
 Indexed in databases/resources: 28
 Editor-in-Chief: none
 Members on Editorial Board: 75
 Reviewers acknowledged: 340
 Web page appearance: good

Open Aerospace Engineering Journal

Bentham open
<http://www.benthamscience.com/open/toaej>
 Origin: USA / United Arab Emirates, ... / hidden
 Started: 2010
 Fees: 250 USD
 White-listed: DOAJ (106/139/0)
 Black-listed: Beall (no comments given),
 Linköpings Universitet
 ISSN, PDF, CC BY-NC, copyright retained
 Articles: 20 (\approx 3 per year)
 Editor-in-Chief: Dan Mateescu, Canada
 Members on Editorial Board: 84
 Web page appearance: “less convincing”

Journal of Aeronautics & Aerospace Engineering

OMICs Group
<http://www.omicsgroup.org/journals/jaaehome.php>
 Origin: USA / India
 Started: 2012
 Fees: 919 USD
 White-listed: DOAJ (1/207/0)
 Black-listed: Beall (no comments given),
 Linköpings Universitet
 ISSN, HTML, PDF, Audio, CC BY, copyright retained
 Articles: 21 (\approx 10 per year)
 Indexed in databases/resources: 4
 Editor-in-Chief: Prof. Raffaele Savino, Italy
 Members on Editorial Board: 47
 Web page appearance: “less convincing”

Frontiers in Aerospace Engineering (FAE)

Science and Engineering Publishing Company
 Journal: <http://www.fae-journal.org>
 Publisher: <http://www.seipub.org>
 USA / China
 Started: 2012
 Fees: 0 USD (in 2013)
 Publisher white-listed: none
 Publisher black-listed: Beall (comments outdated)
 ISSN, eISSN, PDF, CC BY-NC-ND, copyright ret.
 Articles: 22 (\approx 22 per year)
 Indexed in databases/resources: 15
 Editor-in-Chief: Prof. Pizhong Qiao
 Members on Editorial Board: 10
 Web page appearance: good

Advances in Aerospace Science and Technology (AAST)

Scientific Research Publishing
<http://www.scirp.org/journal/aast>
 USA (registration) / China (offices)
 Started: 2013, Fees: 300 USD
 Publisher white-listed:
 DOAJ (127/19000/0), application: OASPA
 Publisher black-listed: Beall (no comments given)
 CC BY or CC BY-NC, copyright retained
 Editor-in-Chief: Prof. Dieter Scholz, Germany
 Members on Editorial Board: 10
STARTUP!

American Journal of Aerospace Engineering

Science Publishing Group (SciencePG)
<http://www.sciencepublishinggroup.com/journal/news.aspx?journalid=309>
 Origin: USA / hidden
 Started: 2012
 Fees: 170 USD
 White-listed: none
 Black-listed: Beall (no comments given)
 Editor-in-Chief: none
 Members on Editorial Board: none
 Web page appearance: good
STARTUP!

Journal of Aeronautical Engineering (JAeE)

Trans Stellar Journal Publication Research Consultancy
<http://tjprc.org/journals.php?type=1&id=2>
 India
 White-listed: none
 Black-listed: Beall (no comments given)
STARTUP!

Not considered in full detail, because the scientific field is broader than “aerospace”:

International Journal of Research in Aeronautical and Mechanical Engineering (IJRAME)

IJRAME Aero Team, Hyderabad
<http://www.ijrame.com>
 (<http://www.mlrinstitutions.ac.in/aeronautical-engineering.html>)?
 Origin: India / hidden
 Started: 2013
 Fees: 50 USD
 Publisher white-listed:
 DOAJ (SPARC Europe Seal) (1/17)
 Publisher black-listed: none
 eISSN, PDF, CC BY, copyright transferred
 Articles: 17 (\approx 17 per year)
 Editor-in-Chief: Mr. Mohammad Salahuddin (student?)
 Members on Editorial Board: 2
 Reviewers acknowledged: 8
 Web page appearance: simple but ok

Journal of Mechanical, Aerospace and Industrial Engineering

Publisher: Scientific Journals International (SJI)
http://www.scientificjournals.org/Journals2011/j_of_mechanical1.htm
 Origin: USA / hidden
 Started: 2011
 White-listed: none
 Black-listed: Beall (no comments given),
 Linköpings Universitet
 Articles: 1 (\approx 1/2 per year)
 Web page appearance: very confusing, little information

International Journal of Mechanical and Aerospace Engineering

World Academy of Science, Engineering and Technology
<http://www.waset.org/journals/ijmae>
 Origin: USA / hidden
 Started: 2012
 White-listed: none
 Black-listed: Beall (no comments given)
 Articles: 79 (\approx 79 per year)
 Web page appearance: very dubious, little information

On DOAJ there are also aerospace journals listed that are published by their own institution – probably more for own purposes than for international authors. All three journals do not charge fees, because they are sponsored by their founding institution (but note the Springer journal!):

INCAS Bulletin

National Institute for Aerospace Research (INCAS)
<http://bulletin.incas.ro>
 Origin: Romania
 Started: 2009
 Fees: 0 USD (according to DOAJ), no information given on web page, response to email: **no fee**, international authors welcome
 Publisher white-listed: DOAJ (1/277)

Journal of Aerospace Technology and Management

Institute of Aeronautics and Space
<http://www.jatm.com.br>
 Origin: Brazil
 Started: 2009
 Fees: 0 USD (according to DOAJ), no information given on web page, not further checked
 Publisher white-listed: DOAJ (1/97)

European Transport Research Review

Springer
<http://www.springer.com/engineering/civil+engineering/journal/12544>
 for the
 European Conference of Transport Research Institutes (ECTRI)
<http://www.ectri.org>
 Origin: Germany
 Started: 2009
 Articles: 110 (≈ 28 per year)
 Fees: 0 USD (according to – information delivered to – DOAJ), no information given on web page, response to email: **1250 EUR** (if not sponsored by ECTRI)
 Publisher white-listed: DOAJ (1/0)

11 Conclusions

It makes sense for everyone that **OA is the way for the future** and to let everyone participate from the common knowledge. As long as the traditional publishers with their subscription-based business model dominate and control the market only **Green OA and self-archiving is possible. This however is not a final solution.** The rate with which self-archiving is done is only 20 % on a world average [45]. With full implementation of OA the rate would be 100 %.

Commercial OA Journals obviously **need to charge publication fees in some form** to be viable as an enterprise. Low cost publishing can be performed better in countries with low labor rates (Egypt, China, India), but errors occur caused by lack of experience of startup companies. Undoubtedly there are various difficulties in these countries to overcome, and off course financial pressure exists in these companies as in companies of other countries.

The *International Journal of Aerospace Engineering* by Hindawi Publishing Corporation is fully white-listed and not black-listed. No other commercial OA journal is without blemish. The startup standalone journal International Journal of Research in Aeronautical and Mechanical Engineering (IJRAME) from Hyderabad, India

seems to be lucky not to have been spotted by any watchdog, but needs still to mature. Institutes working on limited public funding may not be capable of handling large numbers of manuscripts for free in the long run flowing in from all over the world.

To develop a journal that gets accepted and earns a reputation over time it seems to be advisable to meet all quality and publication standards and display them on the journals website in a way that the statements can be proven by the reader. Get the journal listed in DOAJ [25] with SPARC Europe Seal [24], [26] and in Sherpa RoMEO [46]. Publishers should become a member of OASPA [19] and COPE [36] following COPE guidelines and flowcharts. Editors should become members of e.g. the Council of Science Editors (CSE) [47] or the European Association of Science Editors (EASE) [48] and should follow their recommended and other accepted standards preferably the ISO [49] standards that should find world wide acceptance.

Beall's statement "... we recommend that researchers, scientists, and academics avoid doing business with these publishers and journals. Scholars should avoid sending article submissions to them, serving on their editorial boards or reviewing papers for them" **can be seen as libel** without prove (prove seems missing), can have immense consequences for the companies and can destroy them. This is probably what Beall intends. I can think of **two different approaches**:

1. Instead of seeking to have a few major commercial OA aerospace journals in the world, many organizations (universities, research establishments, societies) could handle smaller OA aerospace journals (like the INCAS Bulletin) based on basic and simple HTML or based on the Open Journal Systems (OJS), a journal management and publishing system serving more than 14000 journals around the world [50]. In this way fees could be kept low.
2. In the same way as companies like e.g. Airbus are cooperating with China [51], editors-in-chief can get active and can build quality into existing or startup journals from such countries. Publishers seem to have their

doors wide open for such co-operation and volunteer work. Also in this way fees could be kept relatively low.
Let every nation bring in their strength.

Let's not destroy, but rather let's work together in this world, share our knowledge and let's live in peace!



Fig 3: Logo of the Open Access Spectrum [16]

Access	Reader Rights	Reuse Rights	Copyrights	Author Posting Rights	Automatic Posting	Machine Readability	Access
OPEN ACCESS	Free readership rights to all articles immediately upon publication	Generous reuse & remixing rights (e.g., CC BY license)	Author holds copyright with no restrictions	Author may post any version to any repository or website	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) immediately upon publication	Article full text, metadata, citations, & data, including supplementary data, provided in community machine-readable standard formats through a community standard API or protocol	OPEN ACCESS
OPEN ACCESS	Free readership rights to all articles after an embargo of no more than 6 months	Reuse, remixing, & further building upon the work subject to certain restrictions & conditions (e.g., CC BY-NC & CC BY-SA licenses)	Author holds copyright, with some restrictions on author reuse of published version	Author may post final version of the peer-reviewed manuscript ("postprint") to any repository or website	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 6 months	Article full text, metadata, citations, & data, including supplementary data, may be crawled or accessed through a community standard API or protocol	OPEN ACCESS
OPEN ACCESS	Free readership rights to all articles after an embargo greater than 6 months	Reuse (no remixing or further building upon the work) subject to certain restrictions and conditions (e.g., CC BY-ND license)	Publisher holds copyright, with some allowances for author and reader reuse of published version	Author may post final version of the peer-reviewed manuscript ("postprint") to certain repositories or websites	Journals make copies of articles automatically available in trusted third-party repositories (e.g., PubMed Central) within 12 months	Article full text, metadata, & citations may be crawled or accessed without special permission or registration	OPEN ACCESS
OPEN ACCESS	Free and immediate readership rights to some, but not all, articles (including "hybrid" models)	—	Publisher holds copyright, with some allowances for author reuse of published version	Author may post submitted version/draft of final work ("preprint") to certain repositories or websites	—	Article full text, metadata, & citations may be crawled or accessed with permission	OPEN ACCESS
CLOSED ACCESS	Subscription, membership, pay-per-view, or other fees required to read all articles	No reuse rights beyond fair use/ limitations & exceptions to copyright (all rights reserved copyright) to read	Publisher holds copyright, with no author reuse of published version beyond fair use	Author may not deposit any versions to repositories or websites	No automatic posting in third-party repositories	Article full text & metadata not available in machine-readable format	CLOSED ACCESS

Fig 4: The Open Access Spectrum – A systematic way of showing the openness of a journal [16]

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