

English translation by Google Translator
marginally adapted by TR, 25 November 2012
and revised by Geraldine Schuckelt, January 2013

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Bonn 6th, July 2012

Dear Mr. Riemann,

Enclosed please find my arbitration decision.

Yours sincerely,

[W.L.]

I
The Conflict

The structure of the conflict between the ZFITTER group and the GFITTER group can be presented as follows (data is omitted because it is the structure of the conflict that is under consideration here):

- (1) The software program ZFITTER is an independent scientific achievement which facilitates the investigation of large amounts of data in particle physics (?) in order to determine their significance. The program is not related to specific data or a concrete experiment.
- (2) It has been published as an independent scientific achievement in a suitable forum (CPC). By publishing it there, the authors have declared that they consent to its use for scientific purposes (called a "License" there).
- (3) ZFITTER has been frequently used in physics for specific issues in the past.
- (4) The authors of GFITTER have developed their program with the same objective as ZFITTER. A diploma thesis derives from ZFITTER in the sense that 8200 lines have been taken over by copying from ZFITTER. Apart from this, there have been –

it is assumed so far - no verbatim takeovers of characters.

(5) The functioning of GFITTER is demonstrated in a publication with reference to specific problems. The appendix contains information on GFITTER, although not providing the same amount of detail as the information about ZFITTER in CPC. No third party is able to apply GFITTER based on that publication. The authors also insist that it is a private code.

(6) The GFITTER publication refers to ZFITTER primarily in the header's footnote of the appendix, without revealing there the precise degree of identity and difference between ZFITTER and GFITTER.

(7) In the process of moderation, it was agreed that GFITTER would publish an erratum (which was not precisely described by the proposing Commission).

(8) An erratum has indeed been published; ZFITTER and GFITTER are now in dispute over the extent to which ZFITTER consented to its publication. To judge by the email correspondence shown in the joint conversation, it was at least not published against the will of ZFITTER.

(9) ZFITTER still sees its copyrights and authorship violated or not adequately taken into account.

(10) The dispute has become the subject of a public controversy.

II

Key points

In the following, a solution to the copyright and authorship situation will be proposed. It takes into account the documents that were presented to me (including two moderation reports) and the results of the conversation with "ZFITTER" and "GFITTER".

1. The starting point for these deliberations is the question of the accepted standards of the scientific community, by which the scientists of ZFITTER and GFITTER must abide. These accepted standards are laid down in rules of good scientific practice, superimposed by statutory rules as set out in copyright law (without the emergence of evaluative contradictions).

ZFITTER has been developing under its name software for the recording of large amounts of data from experimental particle physics for about 30 years. It is indisputably an open source, which is evident scientifically (a) and under copyright law (b).

(a) ZFITTER offers to particle physics a solution through which data volumes can be made "to talk". It is not a commercially viable software program (at least it was not intended for that purpose and has probably so far not been usable as such), but is primarily a contribution by mostly theoretical physicists for the purpose described, and it has indeed been taken up by the scientific community, as evidenced by its use. ZFITTER has established itself as a used tool.

(b) Software of a certain level of originality is protected under copyright law, now that this problem has been settled under the German Copyright Act [UrhG = Urheberrechtsgesetz]. Since ZFITTER has been published in CPC [correct for: PCP], its use for scientific purposes is permitted. Incidentally: copyright does not prevent the scientific use of scientific ideas, however formulated (language, numbers, characters), because it is not the scientific content of a publication that is protected, but its form in language, sound or images; where the form is invariable – as in the case of mathematical formulas, algorithms etc. – this may be equivalent to the scientific idea itself. For the program description, though, the situation may be different. In any case, there is no way to privatize contributions to scientific discussion.

In principle, therefore, GFITTER was authorised to use ZFITTER. As an important endeavour to provide a tool for dealing with data in particle physics for the past 30 years, ZFITTER is part of the state of the art - or to quote Tord Riemann in his letter to EPJC from 23.12.2011, page 30: "ZFITTER is part of the living history of elementary particle physics in the era of LEP and after ["]".

2 According to the rules of good scientific practice, however, this was only permitted subject to the appropriate short and concise conditions set out by Tord Riemann in the letter quoted, dated 23.12.2012: "Use it and quote it properly."

So, what does "quote it properly" mean? As is clear from the investigation report of the ombudsmen, the author of the diploma thesis has acknowledged having copied parts of the software in his endeavour to produce GFITTER.

In the light of this, a mere reference to the use of the ZFITTER as a source of ideas is insufficient. The partial identity of the two programs must be disclosed because GFITTER actually incorporates parts of the program (see also point 4 below). The degree of identity between GFITTER and ZFITTER has still not been fully ascertained. Proper quotation requires that the borrowing of knowledge and innovative developments is disclosed.

3. The scientific community is unable to verify such borrowing and innovative developments by comparing ZFITTER and GFITTER, because GFITTER is not available as an open source. The idea of a private code used for publications is scientifically unacceptable. The results presented on the basis of GFITTER cannot be verified if GFITTER, as the tool used, is not published. This should not be misunderstood: GFITTER does not have to be published in CPC or a similar forum; it is sufficient to make it publicly accessible e.g. via a website.

4. It only remains questionable as to whether GFITTER was allowed to acquire appropriate parts of ZFITTER and use these to create a modified tool. ZFITTER is of the opinion (letter of 23.12.2011) that it is part of the terms of use that new software ideas should not be mixed with ZFITTER, in order to retain ZFITTER's clear structure and reliability. Anyone who wishes to propose modifications should participate in the further development of ZFITTER. In oral conversation between ZFITTER and GFITTER this position has been designated as a "cannibalization ban".

However plausible and sensible the suggestion is that it would be beneficial to conduct further development of ZFITTER as a kind of collaborative partner *within* ZFITTER, rather than thinking and working independently from the ZFITTER group, this is not scientifically imperative to the extent that ZFITTER might be able to forbid further development without such collaboration.

This follows from the fact that ZFITTER, as an open source and as representing the established state of knowledge, cannot prohibit or dictate the direction of future knowledge development. Even if ZFITTER were alleged to contain patented knowledge, such a prohibition would not be achievable. The patented knowledge is, for good reason, generally available knowledge; its further development outside the existing patent should indeed be possible. It is possible, for the further development of ZFITTER, to take one component (subject to the proviso: Use it and quote it properly!) and use it for the development of something new. A "cannibalization ban" would be a serious impediment in the process of producing new knowledge. Whether different conditions should apply to commercially viable software is a matter that need not be discussed here.

III

Consequences

(1) GFITTER must be made available on the internet (as was already demanded earlier in a Commission proposal).

(2) The degree of identity between ZFITTER and GFITTER must be determined. For this purpose, neutral experts should be brought in.

(3) The degree of identity must be made recognizable following disclosure of the GFITTER code. This information will become to some extent part of the GFITTER publication, and should therefore not be removed from the internet.

(4) There is no need for a further erratum should that which is published prove inadequate in the light of the establishment of similarities and differences, because its publication on the internet is sufficient to inform the interested scientific community working in the field of particle physics. The GFITTER contributions which have been published on the basis of the former private code (and which ZFITTER should have quoted in exactly the manner as described above) must be cited again on the internet.

(5) The parties are to end the phase of mutual accusations of dishonesty. The proper legal treatment of such software, in the field of tension of the rules of good scientific practice, has not previously been the subject of rule making (as far as I can see), so that definite fixed points are lacking whose existence would justify the accusation of major misconduct. What is indeed true, however, is that the necessary *accuracy of citation* was lacking. But that is not sufficient reason for profound conflicts between ZFITTER and GFITTER.

(6) Should any "reactions" under labour law have been initiated against Tord Riemann - I have not ascertained any facts regarding that - these should be terminated or repealed insofar as they relate to communication between ZFITTER and GFITTER. Disruptions in communication are not usually caused by one side alone, and ZFITTER certainly had reason to assume that the scientific achievements behind ZFITTER have not been sufficiently respected.

Bonn, 3 July 2012
Prof. Wolfgang Loewer

Der ZITIERER muss bei jeder Übersetzung (oder bei jeder Übersetzung) einen ZITIERER in der Übersetzung angeben.

Die Übersetzung in die deutsche Sprache muss die Übersetzung in die deutsche Sprache sein.

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Confirmation

As a sworn translator for the English language publicly appointed by the President of the Higher Regional Court of Dresden, I hereby certify that, to the best of my knowledge and belief, the foregoing is a correct and full translation of the original German language document.

Dr. Geraldine L. Schuckelt

Pulsnitz, 04.02.2013



INTERTE><T

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Bonn, 1. Juli 2013
Prof. Dr. Gerd Giger