

# Web 2.0 and Medical Physics

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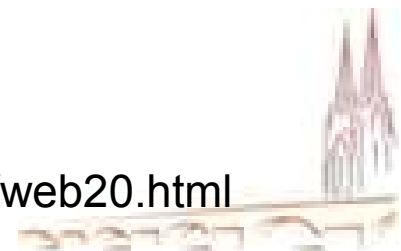


## What is Web 2.0?

- O'Reilly Media 2004
  - Name of a conference
  - No version number
  - Life Software
- No clear definition
- New Way using the Internet
  - Web browser
- Users add value (co-developers)

*„Diagram removed“*

From:  
<http://www.oreilly.de/artikel/web20.html>



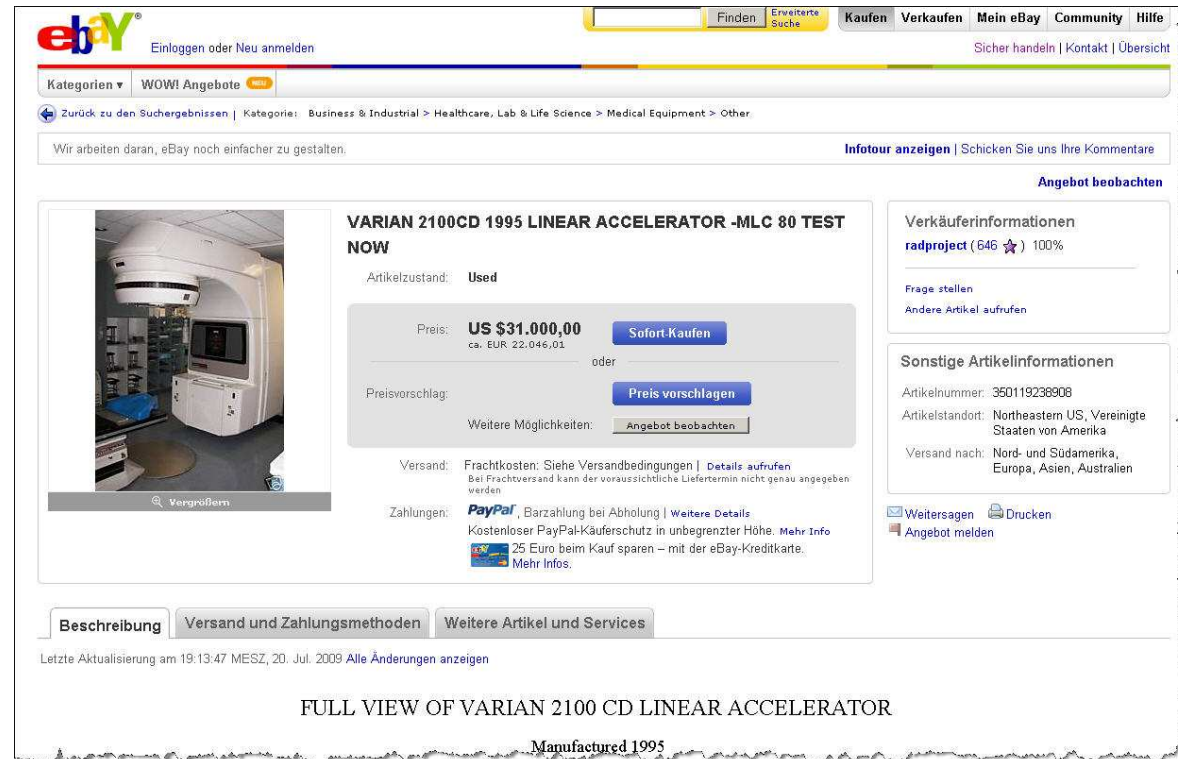
# Applications and Services

## Online shopping and auction website

ebay

– Sell or buy

- Hardware
- Software
- Machines
- Parts



The screenshot shows an eBay listing for a "VARIAN 2100CD 1995 LINEAR ACCELERATOR -MLC 80 TEST NOW". The item is in "Used" condition. The price is listed as US \$31,000.00 (approximately EUR 22,046.01). There are buttons for "Sofort Kaufen" (Buy Now), "Preis vorschlagen" (Make Offer), and "Angebot beobachten" (Watch Item). The listing also includes shipping information, payment methods (PayPal), and seller details for "radproject" with a 100% feedback score. The item is located in the Northeastern US and can be shipped to North and South America, Europe, Asia, and Australia. The listing was last updated on July 20, 2009.

FULL VIEW OF VARIAN 2100 CD LINEAR ACCELERATOR

Manufactured 1995



# Applications and Services

## Encyclopaedias

### Wikipedia

- Participation
- Different Languages
- Picture and photo sharing

**Bremsstrahlung**

From Wikipedia, the free encyclopedia

**Bremsstrahlung** (pronounced [ˈbrɛmsˌʃtrʰʊlʊŋ] (help · info), from German *bremsen* "to brake" and *Strahlung* "radiation", i. e. "braking radiation" or "deceleration radiation"), is electromagnetic radiation produced by the acceleration of a charged particle, such as an electron, when deflected by another charged particle, such as an atomic nucleus. The term is also used to refer to the process of producing the radiation. *Bremsstrahlung* has a continuous spectrum. The phenomenon was discovered by Nikola Tesla<sup>[*citation needed*]</sup> during high frequency research he conducted between 1888 and 1897.

*Bremsstrahlung* may also be referred to as free-free radiation. This refers to the radiation that arises as a result of a charged particle that is free both before and after the deflection (acceleration) that causes the emission. Strictly speaking, *bremsstrahlung* refers to any radiation due to the acceleration of a charged particle, which includes synchrotron radiation, however, it is frequently used (even when not speaking German) in the more narrow sense of radiation from electrons stopping in matter.

The word *Bremsstrahlung* is retained from the original German to describe the radiation which is emitted when electrons are decelerated or "braked" when they are fired at a metal target. Accelerated charges give off electromagnetic radiation, and when the energy of the bombarding electrons is high

Bremsstrahlung produced by a high-energy electron deflected in the electric field of an atomic nucleus

Cross section for the emission of a 30 keV photon

Bremsstrahlung cross section for the emission of a photon with energy 30 keV by an electron impacting on a proton.

**Beschreibung**

Erzeugung von Röntgenbremsstrahlung durch Abbremsung eines schnellen Elektrons in dem Coulombfeld eines Atomkerns (schematische Darstellung)

**References**

- Martin, Dylan (2005). X-Ray Detection  University of Arizona Optical Sciences Center. Retrieved on 2008-12-05.
- Flynn, Chris (2001). 6.6.2 Free-Free or Bremsstrahlung Scattering  Tuorla Observatory. Retrieved on 2008-12-05.

**Licensing**

I, the copyright holder of this work, hereby release it into the public domain. This applies worldwide.

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I grant anyone the right to use this work **for any purpose**, without any conditions, unless such conditions are required by law.

# Applications and Services

## Mailing Lists

- Mail program or Browser
- Database
- User Groups
  - Regional
  - Applicational
  - Manufactural
  - ...

**Mailing Lists**

The following mailing lists and web sites may be of interest to those in the radiation sciences. With mailing lists the postings arrive at your terminal as email. Responses are sent via email to the listserver (i.e., to ALL subscribers) or privately. You will automatically receive instructions on how to unsubscribe after you subscribe to the list.

**The AAPM Mailing Lists**

The AAPM supports a number of **official mailing lists** for announcements, solicitation of member feedback and other AAPM business. You are automatically subscribed to the the members' one-way list if you are an AAPM member and have your email address on file in the membership directory. The contact for posting to this list is the AAPM's listmaster, **Michael Woodward**. The AAPM also supports a number of closed 2-way lists for committees and other of its working groups.

A number of **AAPM Regional Chapters** also have their own mailing lists, some hosted by the AAPM, others hosted elsewhere. Some are unmoderated two-way discussion lists and are used for announcing chapter meetings and discussing chapter issues. AAPM chapter members may or may not be automatically subscribed depending on their chapter's mode of operating the list. Contact the Chapter President for the details of a given list.

Members of the American medical physics community seeking a national two-way list to discuss organizational or national issues may use MedPhysUSA without regard to membership in any particular organization.

**Diagnostic Imaging Medical Physicists List (DXIMGMEDPHYS)**

To subscribe, simply send the following text in the body of a message (not subject!) to [listserv@hermes.gwu.edu](mailto:listserv@hermes.gwu.edu):

subscribe Name-of-the-list Your-First-Name Your-Last-Name  
 example: subscribe DXIMGMEDPHYS John Doe

Please note that your message cannot contain any other text, such as your signature file. Any other text is interpreted as a command, the LISTSERV server will return errors.

**The American Medical Physics Mailing List (MedPhysUSA)**

MedPhysUSA provides an unmoderated two-way forum for issues that have limited interest outside of the USA and that would be inappropriate or inconsiderate to send to physicists worldwide via Global MedPhys. Topics may include government reimbursement, state and federal regs, certifying boards, job postings, local and regional meeting announcements, etc. However everyone, regardless of location, is welcome to subscribe. Global MedPhys and MedPhysUSA subscriptions are completely independent of each other even though they come from the same listserver. You subscribe via the [website](#) or by sending email with the text:

subscribe MedPhysUSA firstname lastname  
 without punctuation, degrees, certifications, military rank, etc. to [listserv@lists.wayne.edu](mailto:listserv@lists.wayne.edu)

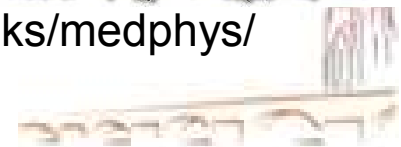
For example send  
 subscribe MedPhysUSA John Doe  
 to the LISTSERV address from the email address where you wish to receive the email.

The subject field is unimportant, only the text of the message is read by the Listserv software.

Subscription options and list archives are available at [lists.wayne.edu/archives/medphysusa.html](http://lists.wayne.edu/archives/medphysusa.html).

**The Global Medical Physics Mailing List (MedPhys)**

<http://www.aapm.org/links/medphys/>





# Applications and Services

## Web Forums

- <http://www.medphysfiles.com>
- <http://www.advancedphysics.org/forum/>
- <http://www.radiotherapy.com/>  
– PW: fletcher
- <http://www.strahlentherapieforum.de/index.php>
- <http://www.otp-usergroup.de/forum/>



**MEDPHYS FILES**  
 Login or Register Home • Downloads • Community Forums • My Account August 4, 2009

Welcome to MedPhys Files!

**APF**  
 Advanced Physics Forums

User Name:  Password:  Remember Me?  Log in

Home Register FAQ Members List Calendar News New Posts Search

radiotherapy.com  
**Forums for radiotherapy.com**  
 Up One Level  
 Available Forums:  
**Equipment** Posts: 1262 Last Post: 07-15-09 02:55

Strahlentherapie-Forum  
 ak-user.de  
 Registrieren | Kalender | Mitglieder | Team | Shop | FAQs | Start

Willkommen im ak-user.de - Strahlentherapie-Forum  
 Sie sind nicht angemeldet. Wenn dies Ihr erster Besuch hier ist, lesen Sie sich die [Hilfe des Forums](#) durch. Dort wird Ihnen die Bedienung des Forums näher erklärt. Sie müssen außerdem registriert sein, um alle Funktionen dieses Forums zu nutzen. Benutzen Sie das [Registrierungsformular](#) um sich zu registrieren oder [informieren](#) Sie sich ausführlich über den Registrierungsprozess. Um Beiträge zu lesen, suchen Sie sich das Forum aus, das Sie interessiert. Falls Sie bereits in diesem Forum registriert sind, können Sie sich [hier](#) anmelden.

Anmelden

**phpbb**  
 creating communities

**www.otp-usergroup.de**  
 Anwenderforum für das Bestrahlungsplanungsmodul von Oncentra  
 FAQ | Suchen | Mitgliederliste | Benutzergruppen | Profil | Sie haben keine neuen Nachrichten. | Logout [ tre ]

Hier letzter Besuch war am: Mo, 03.08.2009 14:16  
 Aktuelles Datum und Uhrzeit: Di, 04.08.2009 09:29  
 www.otp-usergroup.de Foren-Überblick

Forum	Themen	Beiträge	Letzter Beitrag
<b>Aktuelle Nutzungsregeln / Forum Rules</b> Bitte zuerst lesen! / Please read first! Bitte erst lesen und dann registrieren und posten. Diese Regeln werden mit der Registrierung bzw. dem Posten von Beiträgen verbindlich anerkannt. / Read the rules first, please! By using this board you agree to all these rules.	1	1	So, 21.10.2009 03:01 malini
<b>Oncentra Treatment Planning</b>			
<b>Ankündigungen</b> Hier finden Sie Ankündigungen rund um OTP. Moderator: <a href="#">Susanne</a>   <a href="#">Siska</a>	0	0	Keine Beiträge
<b>Anregungen und Änderungswünsche</b> Hier haben Sie die Möglichkeit, über Änderungswünsche und Anregungen zu diskutieren. Moderator: <a href="#">Siska</a>	3	6	So, 27.01.2007 19:07 malini
<b>Fragen und Antworten</b> Allgemeine Fragen und Antworten rund um OTP Moderator: <a href="#">Siska</a>	8	23	So, 22.09.2007 18:51 malini
<b>Diskussionen</b> Moderator: <a href="#">Siska</a>	4	13	Do, 10.04.2008 18:24 malini
<b>Bekannte Fehler und Einschränkungen</b> Hier finden Sie Informationen zu bekannten Fehlern und Einschränkungen. Dieses Forum bietet nicht die Möglichkeit, Fehlermeldungen abzugeben. Die Meldung neuer Fehler ist weiterhin nur über Theranotic möglich. Moderator: <a href="#">Susanne</a>   <a href="#">Siska</a>	0	0	Keine Beiträge

Alle Foren als gelesen markieren  
 Alle Zeiten sind GMT + 1 Stunde

Wer ist online?  
 Unsere Benutzer haben insgesamt **49** Artikel geschrieben.  
 Wir haben **48** registrierte Benutzer.  
 Der neueste Benutzer ist [Erschick](#) [Lukas](#).  
 Insgesamt ist **1** Benutzer online: **1** registrierter, kein versteckter und kein Gast. [ [Administrator](#) ] [ [Moderator](#) ]  
 Der Rekord liegt bei **9** Benutzern am Do, 11.05.2004 19:53.  
 Registrierte Benutzer: [Siska](#)

Diese Daten zeigen an, wer in den letzten 5 Minuten online war.

# Applications and Services

## Journals

- Online is not sufficient
- Peer Review
  - Filter
  - Open peer review
- Nature Trial 2006
  - Open Website
  - User Comments
  - Only 5% of Authors agreed
  - Less than half of them got comments



The screenshot shows a web browser window with the URL <http://www.nature.com/nature/peerreview/faq.html>. The page features a navigation bar with links to "nature.com", "Publications A-Z index", and "Browse by subject". Below the navigation bar is an advertisement for Ambion's "Silencer" siRNA libraries. The main content area has a red header with the "nature" logo and the tagline "International weekly journal of science". A search bar is located in the top right corner. The page content includes a breadcrumb trail: "Journal home > Web focuses > Peer Review". A table of contents is visible on the left side, listing "Journal home", "Advance online publication", "Current issue", "Nature News", and "Archive". The main text area is titled "Nature Peer Review Trial: Frequently Asked Questions (FAQ)" and contains the following text: "In June 2006, for about 3 months, Nature is undertaking a trial of one type of peer review. This trial is continuing in parallel with the usual peer review process, and will allow the editors to assess the value of soliciting comments from scientists while submitted papers are being peer reviewed. Below is a list of questions and answers which we hope will make clear to authors, reviewers, scientists and readers how the trial works and what will happen as a result."



## Applications and Services

### Others

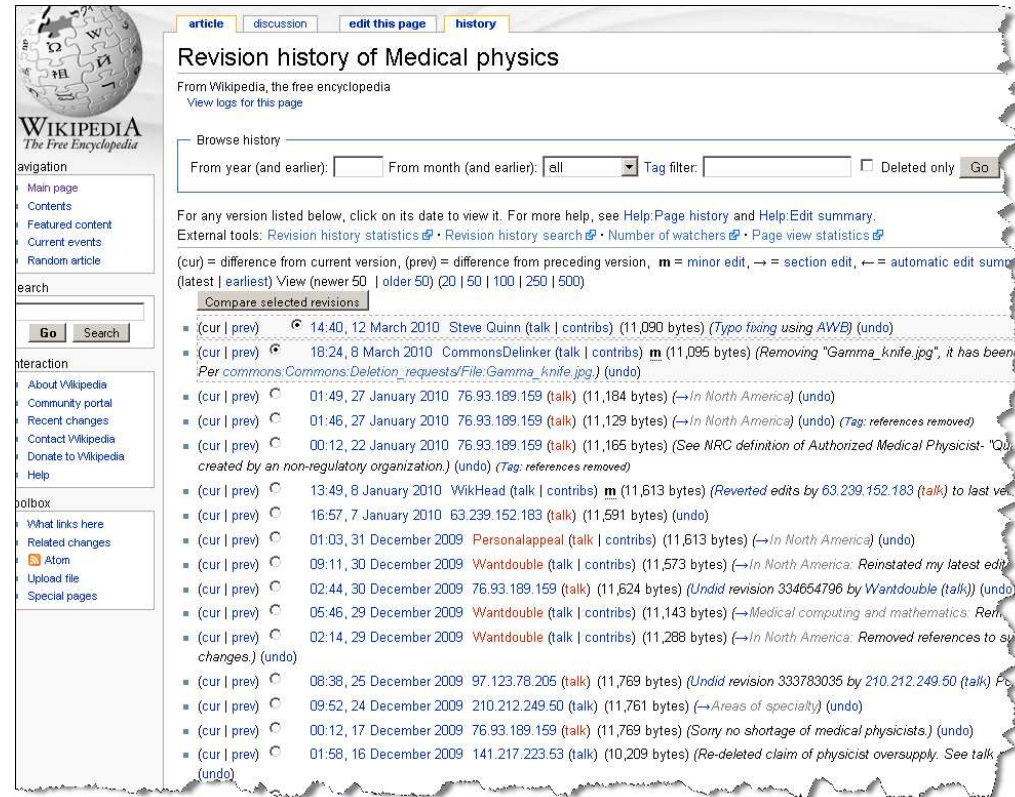
- Blogs
  - <http://penscience.wordpress.com/>
- Online Bookmark Collections
  - <http://delicious.com>
  - Tagging
- Foto Sharing Services
  - Tagging
  - Licenses
- Video Sharing Services
  - Interviews
  - Documentations
  - Teaching Videos, Lectures
  - Product Presentations





# Usage

- Ebay
  - USA
- Wikipedia
- Mailing Lists
- Bookmark Collections
- Foto- and Video sharing
- Forums
- Blogs
- Journals



The screenshot shows the 'Revision history of Medical physics' page on Wikipedia. It includes a search bar, navigation tabs (article, discussion, edit this page, history), and a list of revisions with columns for date, time, user, and byte size. The list shows various edits from 2010, including fixes, deletions, and reverts.

Time	User	Byte Size	Summary
14:40, 12 March 2010	Steve Quinn	(11,090 bytes)	<i>Typo fixing using AWE</i>
18:24, 8 March 2010	CommonsDelinker	(11,095 bytes)	<i>Removing "Gamma_knife.jpg", it has been Per commons:Commons:Deletion_requests/File:Gamma_knife.jpg</i>
01:49, 27 January 2010	76.93.189.159	(11,184 bytes)	<i>→In North America</i>
01:46, 27 January 2010	76.93.189.159	(11,129 bytes)	<i>→In North America</i>
00:12, 22 January 2010	76.93.189.159	(11,165 bytes)	<i>See NRC definition of Authorized Medical Physicist- "Qu created by an non-regulatory organization."</i>
13:49, 8 January 2010	WikHead	(11,613 bytes)	<i>Reverted edits by 63.239.152.183 (talk) to last ver.</i>
16:57, 7 January 2010	63.239.152.183	(11,591 bytes)	
01:03, 31 December 2009	Personalappeal	(11,613 bytes)	<i>→In North America</i>
09:11, 30 December 2009	Wantdouble	(11,573 bytes)	<i>→In North America: Reinstated my latest edit</i>
02:44, 30 December 2009	76.93.189.159	(11,624 bytes)	<i>Undid revision 334654796 by Wantdouble (talk)</i>
05:46, 29 December 2009	Wantdouble	(11,143 bytes)	<i>→Medical computing and mathematics. Ref</i>
02:14, 29 December 2009	Wantdouble	(11,288 bytes)	<i>→In North America: Removed references to sy changes.</i>
08:38, 25 December 2009	97.123.78.205	(11,769 bytes)	<i>Undid revision 333783035 by 210.212.249.50 (talk) P</i>
09:52, 24 December 2009	210.212.249.50	(11,761 bytes)	<i>→Areas of specialty</i>
00:12, 17 December 2009	76.93.189.159	(11,769 bytes)	<i>Sony no shortage of medical physicists.</i>
01:58, 16 December 2009	141.217.223.53	(10,209 bytes)	<i>Re-deleted claim of physicist oversupply. See talk (undo)</i>



## Discussion

- All well accepted applications are not dedicated to medical physics.
- Some applications are hard to find.
- Forums:
  - For many web forums there are competing mailing lists.
  - For some web forums the target group might be too small.
  - Regular user meetings and service support might help in many cases.
- Blogs:
  - Time consuming
  - Enjoyment? <sup>1</sup>
- Journals
  - There is no Web 2.0 journal.
  - Fear for losing results to a competitor.

<sup>1</sup>Stöckl R, Rohrmeier P, Hess T. Why Customers Produce User Generated Content. In: Hass B, Walsh G, Kilian T, editors. Web 2.0. Neue Perspektiven für Marketing und Medien. Berlin, Heidelberg: Springer; 2008, p. 272–87.



## Conclusion

- Improvement of keywords in the header of Websites.
- There is still the chance for more offers .

