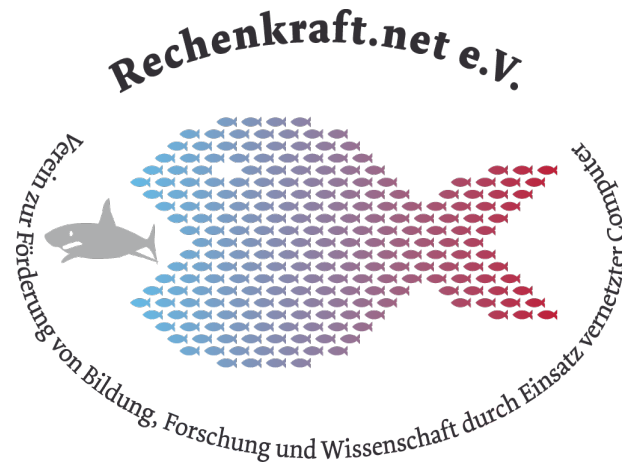


The German Non-Profit Society Rechenkraft.net e.V.

Citizen Science since 2001

by Uwe Beckert

Amsterdam, 2014-09-24



Translation

Rechenkraft

Computing Power

Goal

- Spread knowledge about distributed computing
 - Volunteers
 - Scientists
- Promotion of education, research and science through the use of networked computers

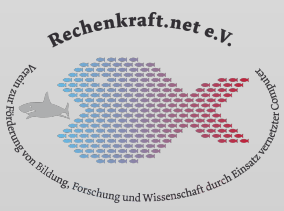
An Idea Has Been Born

April 2001 Michael "Bananeweizen" Keppler as initial founder of the team RKN started building up the early versions of the project database

June 2001 Rechenkraft.net message board was set up

next 3 years various discussions and team challenges mainly crunching for Folding@Home and SETI@Home, but new projects got attention as well

full time line can be found in our Wiki under Association



2014-09-24

Rechenkraft.net e.V.

Uwe Beckert

A Start Has Been Made

May 2005 the Wiki was set up

July 2005 RKN e.V. became officially non-profit

July 2007 first RKN Seal of Approval awarded to WCG

Sep. 2007 official partner of WCG

Nov. 2008 petition addressed to German parliament to enable DC on non-security related public computers

June 2009 I got interviewed by German public TV station ZDF about Yoyo@home

Combining Efforts

June 2010 RKN e.V. presents its project RNA World on the RNA 2010 conference in Seattle/USA

Sep. 2010 Frank "frank" Strohdiek got interviewed by German TV station HR about CPDN
further presentations about RNA World at the MIT (Cambridge/USA) and Dresden/Germany

Feb. 2011 RKN e.V. became an official member of the IDGF

Combining Efforts

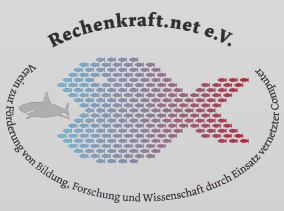
February 2012: 2nd Heidelberg Forum for Young Life Scientists (RNA World, Rechenkraft.net)

June 2013: first Radio Rechencast Podcast

July 2013: [hsmr] Hackspace Marburg

Registered Members: 79 (as of 2014-09-20)

Annual Budget: approx. € 3,400



2014-09-24

Rechenkraft.net e.V.

Uwe Beckert

Conferences

- Chemnitzer Linux-Tage
- LinuxTag Berlin
- BoincWorkshop
- DebianMed
- Citizen Cyberscience Summit
- BürgerSchaffenWissen – government invitation to find citizen science strategy for Germany

An Open and Pleasant Community

- lively message board with more than 2,600 members
- discussions about every project
- often better and faster project specific support by other volunteers than in the project's message boards
- mainly German but English subboard available
- meet in real life

<https://www.rechenkraft.net/forum/>

Steadily Growing Knowledgebase

- MediaWiki based (everybody can contribute)
- detailed description of (almost) every DC project
- multi-language
(some pages are already translated into English and Brazilian Portuguese)
- extensive electronic library with (scientific) publications by (or related to) DC projects

<https://www.rechenkraft.net/wiki>

Supporting Rocket Science

Constellation

- platform for aerospace simulations
- different applications
- productive since April 2011
- further supporters are DGLR and Selfnet e.V.

<http://www.aerospaceresearch.net/>

Enabling Others



Active User: 2.720
Active Computer: 4.666 (8,9 TeraFlops)

- started as an experiment on my private laptop in 2007
- wrapping Distributed.net client (OGR project)
- further projects got wrapped:
 - Math: Odd Weird Search, Harmonious Trees, ECM, Euler
 - Particle Accelerator Design: Muon
 - Evolutionary Research: Evolution@home
- Euler subproject finished on 26th July, 2011
- Harmonious Trees finished on 15th Feb, 2014

<http://www.rechenkraft.net/yoyo/>

Getting a Grip on ncRNAs



Active User: 947


Active Computer: 2.092 (4,128 TeraFlops)

- initialised and run by Michael H.W. Weber, PhD
- scanning the fully sequenced genomes of various organisms to annotate and map ncRNAs
- utilise algorithms provided by the Infernal toolkit
- wet-lab experiments by Srinath Thiruneelakantan for in-silico validation
- open access database for all results in development

<http://www.rnaworld.de/>

RNA World – Job Submission

New job for yoyo[Friends] at 18 Jun 2011 19:01:37 UTC - SeaMonkey



RNA World
(beta)
Please visit donation page to help the project cover running costs.

Message boards | Chat | Project Description | Statistics | Rechenkraft.net

New job for yoyo[Friends] at 18 Jun 2011 19:01:37 UTC

New job specifics for cmsearch XXL (large) 1.0.2

Name of job

Upload nucleic acid sequence to be analyzed [FASTA format only]

Upload covariance model (CM) file

Has this CM been calibrated using CMCALIBRATE?

CMSEARCH parameter (optional)

[Infernal Manual](#)


Commands

[Go back to your queue](#)
[Log out](#)

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Job 5007450 of yoyo[Friends] at 18 Jun 2011 18:54:45 UTC - SeaMonkey



RNA World
(beta)
Please visit donation page to help the project cover running costs.

Message boards | Chat | Project Description | Statistics | Rechenkraft.net

Job 5007450 of yoyo[Friends] at 18 Jun 2011 18:54:45 UTC

Job specifics

Jobname:	yoyo_testA_4
Status:	finished
Application:	-
Submit time:	-
BOINC Workunit name:	cms_u1[yoyo_testA_4]_1_Clostridium-botulinum-B-str.-Eklund-17B_CP001056.cir.EMBL_1300639204_1
BOINC Workunit ID:	5007450
Input file:	-
Output file:	cms_u1[yoyo_testA_4]_1_Clostridium-botulinum-B-str.-Eklund-17B_CP001056.cir.EMBL_1300639204_1_0.zip

Commands

Personal job list of yoyo[Friends] at 18 Jun 2011 18:46:28 UTC

You have 4 job(s) listed

Job No.	Submit time	Status	Jobname (click for details)	BOINC Workunit ID
1	-	finished	yoyo_testA_4	5007450
2	-	finished	yoyo_testA_3	5007449
3	-	finished	yoyo_testA_1	5007447
4	-	finished	yoyo_testA_2	5007448

Commands

You can submit 66 more jobs for: [upperCASE \(5\)](#), [cmsearch XXL \(large\) 1.0.2 \(50\)](#), [cmcalibrate 1.0.2 \(5\)](#), [emalign 1.0.2 \(5\)](#), [embod 1.0.2 \(5\)](#).

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[Your computers](#)
[Log out](#)

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Learned from our DC projects

- Take volunteers seriously
- Communicate open, specially on problems of any kind (technical, monetary, time, ...)
- Answer forum questions fast
- Provide frequent news
- Credits are holy, NEVER remove them, be carefully, don't abort running wus
- Financial situation could be better

Learned from our DC projects

- Unexpected things happens
 - compiling OS support
 - screen saver
 - new apps (for yoyo@home, visualization RNA World)
 - big donations
 - 2000h non check pointing work units are possible
 - Translations (RNA World, 12 languages)
 - ...

Thank You

Any Questions?

Uwe Beckert – beckert@gmx.de

<http://www.rechenkraft.net>
<http://forum.rechenkraft.net>

<http://www.rechenkraft.net/yoyo/>
<http://www.rnaworld.de>