



*an introduction to the  
history of European  
computer science and  
technology*

camille akmut



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# Hackers of Port-Royal : various philosophers and mathematicians of that institution.

Camille Akmut

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## Abstract

### *Introduction*

Even historians writing at the beginning of the 20th c. felt the need to apologize to their readership for writing "yet another history" of Port-Royal<sup>1</sup>.

But, this is guaranteed not one of them!;

Were the Port-Royal intellectuals history's first "hacker" group? – we ask here.

They mixed various disciplines, attitudes towards knowledge (from degree-holding like Arnauld to self-taught like Lancelot or home-schooled like Pascal), and specialties (pedagogy to epistemology); forming an ensemble of personalities whose success lied somewhere between anarchism of methods, if not ideas, and communism of resources; practices that recall today's hackers — no anachronism intended this time.

At the very least they offer an example of how to create an interdisciplinary collective in the 17th century (covering philosophy, linguistics, mathematics-engineering, etc.)... History for history's sake is futile, and present-day readers may derive their own lessons from these now partially forgotten figures.

The linguist Jean-Claude Pariente noted, apologizing too, that it was not always easy to distinguish between "logic and grammar", and this was no banality to acknowledge;

For the historian the main difficulty lies in making choices :

between the Trojan horse of classical literature – an early recorded instance of social engineering – and that of Headley, we must draw lines somewhere too. They should be neither too large, nor narrow.

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<sup>1</sup>Bremond made this remark in his 'History of religious sentiment', who explicitly meant Sainte-Beuve [but these histories go back to the 17th c., and Racine can be named a.o.]

## NOT EVERYONE HAS THE SAME SKILLSET

Or, the same level of skills;

Pascal had a unique knowledge of computers (in fact, Pascal, it could be argued, was the world's expert on that question - Schickard excepted), and had more knowledge of mathematics than anyone else in that group (at least Arnauld).

"Pascal had by far the greater knowledge of mathematics, as Arnauld freely confesses" — *The Mathematics of Great Amateurs*, p. 105.

Nicole had historical skills :

"a historian well versed in the theological systems of the past, he could discern the complexities of issues that the naivety and ignorance of [others] handled without problems (...) To that group ["parti"] he brought a spirit already fashioned elsewhere, habits, methods and intellectual preferences"<sup>2</sup>

("at the age of fourteen [had] read all the Greek and Latin authors in his father's library"<sup>3</sup>)

## NO ONE IS QUALIFIED, OR AUTHORIZED

Arnauld had aspirations in law and later advanced degrees in theology (an expert of the Church fathers – e.g. St Jerome or Augustine).

Pascal had no degrees, was home-schooled by a father mathematician.

Nicole was a historian. Lancelot seemed more preoccupied with pedagogy (being in charge of schooling?)

P. was not received in P-R with a warm welcome,

"*Coming from a person such as him, No miracle can be expected*"  
Mother Angelique judged<sup>4</sup>,

while it took a long time for Nicole to join the group, never quite accepted.

"He [Nicole] was regarded with some suspicion : he was accused of  
"*spoiling the spirit of Arnauld*"<sup>5</sup>,

Then the miracle came in the form of not only the *Pensees*, a work written by a former mathematician and engineer that handled in addition to number theory and machines, of tides and the moon, Justice and Man's nature; but also

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<sup>2</sup>Strowski 1908 : 7

<sup>3</sup>Tollemache 1893 : 163-4.

<sup>4</sup>Found in Strowski 1908 : 8. [Vol. 3]

<sup>5</sup>On Nicole's beginnings at P-R : Strowski 1908 : c. 6-7.

in form of an influential Grammar and a Logic – precursors of Chomsky (at least according to him<sup>6</sup>).

Who had given Pascal an authorization to declare himself a philosopher? No one. [Just as no one had given McCarthy any permissions to work on Lisp.]

Lancelot, co-author with Arnauld of the Port-Royal Grammar, seems to have been mostly self-taught.

”As Lancelot advanced in years, he was conscious of grave defects in the system [of the seminaries where he had been put] there was but little spiritual training, (...) He acquired a certain amount of Greek and Latin and Theology, sufficient”<sup>7</sup>

for his purposes... [then met S-C, etc.]

## EXCHANGES OF IDEAS

To give one example of this, Arnauld’s ‘New elements of geometry’, a text-book aiming to reform the teaching of that discipline, can be named which came as the result of an improvement made upon Pascal’s own work :

”He tells us in the preface [the] story of how he came to write it. Pascal (...) had written a short essay on the beginnings of geometry. This fell into the hands of Arnauld, who was astonished at the confusion that subsisted in the work owing to the unnaturalness of the order. He said jokingly that if he had a little time, he could produce something much better. The occasion arose, and he produced the book under discussion.”

— *ibid*, 108<sup>8</sup>

Pascal recognized it as such and welcomed the changes, according to Nicole<sup>9</sup> :

” *When Pascal saw that work he [discarded his own] and admitted frankly that M. Arnauld’s work [was better]*”

Nicole is also reported to have held that (compatible with the above) :

”*The mind is formed more by intercourse with others than by anything else. What one reads one forgets; it is only when one has said a thing that one really knows it*” (trans. Marguerite Tollemache?)<sup>10</sup>

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<sup>6</sup>For a critique of this illustrious attributed heritage, see Pariente 1975.

<sup>7</sup>Tollemache 1893 : 28.

<sup>8</sup>(Coolidge himself based his developments on (historian of maths) Bopp.)

<sup>9</sup>Cited in Coolidge, here a translation is provided.

<sup>10</sup>Tollemache’s monograph, the section on Pierre Nicole.

## DATA NETWORKS

Mersenne received, read, sent, and communicated back thousands upon thousands of messages...

Descartes continued to write to him until shortly before his death; Arnauld in turn sent-got from Descartes two letters in the year 1648 (D. died in 1650).

## SOME UNITY IS REQUIRED, BUT NOT EVERYTHING MUST BE SHARED

Port-Royal philosophers's common ground was the union of Augustine (through Jansen and St-Cyran) and Descartes.

They agreed on religion, and specifically Jansenism, as well as a general direction for philosophy (with some disagreements here).

If Pascal was going to choose Christianity, he would also pick (what he perceived to be) its most strict variant. He was uncompromising in that way.

Jansenism - based on a re-reading of Augustine - preferred ideas of sin, penitence and, perhaps even more stringently, predestination : the idea that it was not a matter of individual efforts, but God had already chosen.

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This however did not mean that everyone needed to share all of the same ideas.

Pascal had famously attacked Descartes, but Arnauld and Nicole (and others) were close to Descartes<sup>11</sup>...

D. in turn held Arnauld in highest esteem :

*"It would have been hard to wish for a better judge of my writings, than the one whose remarks you have sent to me; he treats me with such gentleness and civility, that I can very well see that nothing in his aim was directed against me or the subjects which I study; and yet with great care he examined what he fought, that I am also certain [he has fully understood me]"*

[background : the meditations were followed by so-called objections by prominent philosophers of the time, among whom Arnauld, Gassendi, Hobbes... Arnauld's objection was communicated to D. via Mersenne]

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And, even Pascal had been obviously very influenced by Descartes : his writings on infinity echo those in particular of the 3rd meditation ('That there is a God'). God's attributes (Fifth meditation). Etc..

*"By (the word) God I mean an infinite, eternal, immutable... substance."*<sup>12</sup> "Par le nom de Dieu j'entens vne fubftance..."

<sup>11</sup>"They were the most famous, but not the only ones who united the love of Augustine with that of Descartes" (See the entire passages, pp. 432-4, in Bouiller 1865.)

<sup>12</sup>Oeuvres 9 : 35.

(whose publication had preceded Pascal's writings on that topic, Pensees, by about a decade or two, first in Latin)

We find in Descartes the same, or similar ideas about infinity being something that escapes human reason, all the while being a part of it :

*"for, as much as the idea of this substance is within me (...) being finite myself, I would not have an idea of an infinite substance, had it not been placed there by some truly infinite substance"*<sup>13</sup>

The same could be said of the Port-Royal Logic whose various parts recall some of the meditations e.g. the Fourth one "Of false and true".

## COMMON SPACES, RESOURCES

"They have most likely put their resources in common (...) The administration of these resources are placed in trusted hands (...) they retain personal autonomy, and regulate their days according to their conscience"<sup>14</sup>

Port-Royal, being the headquarters of Jansenism, was the space where our hacker-philosophers gathered (with other like-minded individuals they stayed in contact through letters).

## LIBERATION FROM IMPOSED WORK

In the 17th c., (as in the 21st...), a principal way to escape work – a condition to dedicate oneself to other, more important tasks – was to be born into the right families. Pascal and Arnauld both fit this pattern, coming from the same background of 'robe nobility', and Nicole too<sup>15</sup>.

Others, like Mersenne, came from the people, and found in the religious professions spaces of freedom that allowed them to turn to their various activities. Lancelot "was placed in the seminary" when twelve years old<sup>16</sup>.

## DISCIPLINE

*"Every day they get up at three in the morning", "go to bed at eight".* This gives them 7 hours of sleep. Still in bed, their work starts. Not fully clothed, their work continues... It never ends, and repeats itself. [See appendix]

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<sup>13</sup>Oeuvres 9 : 36.

<sup>14</sup>Strowski 1908 : 4.

<sup>15</sup>The latter possibly to a lesser extent. His father is described in any case as "a ... lawyer, ... and a classical scholar, who rose to be a judge" (Tollemache).

<sup>16</sup>Tollemache 1893 : 27.

**\*\*\* Epilogue \*\*\***

Pascal died in 1662.

Port-Royal was repeatedly attacked (for "heresies" – the 17th c. equivalent of "terrorism", one concept as malleable as the other), and finally destroyed.

"Arnauld was in his sixty-eighth year when he [fled] (...). Nicole, always [slightly cowardly], had already taken flight, and made his way to Brussels, where he was afterwards joined by Arnauld. But Nicole soon deserted his old friend, and entered into correspondence with the Archbishop of Paris, promising him complete subservience if only he might be permitted to return (...) Arnauld kept to his purpose, and remained till his death..."<sup>17</sup>

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<sup>17</sup>Tollemache 1893 : 144.

## Primary sources

\* Arnauld.

- Objection to the Meditations.
- *Les nouveaux elements de Geometrie*.

\* Arnauld and Lancelot.

- *Grammaire*.

\* Descartes.

- *Meditations...*  
e.g. Adam and Tannery vol. 9. [Older French], Beyssade [Modern French].  
(The Meditations is a short text. Divided into 6 meditations.)
- Answer to Arnauld's objection (sent to Mersenne).  
e.g. Beyssade.
- (1647-1650). Correspondence with Arnauld, Mersenne...  
e.g. Adam and Tannery vol. 5. [part Latin]

Adam and Tannery (eds.). *Oeuvres*. Leopold Cerf. Many vol..  
(The same Tannery was also responsible for an Oeuvres of Fermat.)  
—, 1904. Vol. 9. —, 1903. Vol. 5.

Beyssade (eds.). 2011. *Meditations metaphysiques*. Flammarion.  
(For 'objections' and D's answers.)

\* Fontaine, Nicolas. 1738 [mdccxxxviii]. *Memoires pour servir... / 'Memoirs to serve in the history of Port-Royal'* by M. Fontaine. Vol. 1. Cologne.

## Secondary sources

● Boullier, Francisque. 1865; 68. *Histoire de la philosophie cartesienne*. Delagrave etc.. 2 vol..

● Coolidge, Julian. 2002 [1949]. *The Mathematics of Great Amateurs*. Oxford University Press.

● Pariente, Jean-Claude. 1975. "Grammaire generale et grammaire generative" *Actes...* 1(5-6) : 36-49.  
("Arnauld et Nicole : precurseurs de Chomsky?")  
—, 1984. "Grammaire et logique a Port-Royal" *Histoire Epistemologie Langage* 6(1) : 57-75.

● Tollemache, Marguerite. 1893. *French Jansenists*. Kegan etc..  
((Early?) English-language book on Saint-Cyran, Pascal, Arnauld, Nicole...)

ACCOUNT  
Of the conduct and exercises of the solitary penitents of  
Port-Royal des champs; November 23rd of 1644.

Every day they [”ils”] get up at three in the morning, and so soon as awake, following the sign of the cross, go through the following adorations.

*Act of adoration done in the morning upon waking up, while still lying in bed.*

Blessed be the day of the birth, the death and the resurrection of Jesus-Christ.

*Having put on a part of their clothes. Adoration to the Saint Trinity*

Oh my God, Father, Son and Holy Spirit, I adore you - in your unity and the trinity of your persons. I thank you for having preserved me during the night and beg you to guide me through this day.

(...)

I make honorable amends for all the sins that I have committed from the time I was able to use reason up to now.

*Adoration to our Lord Jesus-Christ*

I adore you, oh my savior Jesus-Christ and your humanity [realized in all of your states], mystery, thoughts, speeches/words, actions, movements, pain interior and exterior. [repetition of previous adoration]

*Hail the Saints*

I salute you, oh Saint Michel, and you, my guardian Angel, S. Pierre, S. Paul, S. N. patron of this place, and you S. N. my patron. (...)

*Daily demands*

Give me grace, oh my God, to be among those few select ones who will be called to you.

[Note : reference to the theory of predestination, see Augustine, Jansen.]

(...)

Be graceful and let me live and die a penitent.

(...)

Following these acts of adoration, now properly clad, they taken holy water while saying ”Afperges me”.

[...]

## THEIR PRAYERS

Every day, they read one chapter of the Gospel and of S. Paul on their knees, as S. Charles had, whose eminent saintliness was particularly venerable to them, for having in their own times restored penitence.

(...)

Thus God speaks to them in his holy Scripture, and they [to him/them] in their prayers. (...) They read these divine statements with a deep reverence; adoring those they do not hear [”qu’ils n’entendent pas”], as S. Augustine had ordered ... (...)

We go to bed at eight, after having done the above-reported adorations. Thus one sleeps from 8 to 3, which gives seven hours.

## MANUAL WORKS

Two hours in the morning and two hours in the afternoon [”apres-dinee”] are reserved for manual work. Trees are pruned. One works on plants or herbs. We pick fruits; and one only concentrates on necessary works.

(...)

They [the solitaries] keep happy, and feel honor from the humiliation/humility of these tasks.

(...)

after all S. Paul himself worked and ordered the Christians of his days to work [similarly]

## THEIR SATISFACTION AND JOY

Grace have healed them from their most violent passions, their material desires, and the worldly honors [”defirs des bien & des honeurs”] that put men in a position of servitude;

they only seek God which they find at every hour of the day.

(...)

## THEIR SOLITUDE

They only deal with the [discoveries / ”nouvelles”] of the other world (...) They have renounced all those of this one.

(...)

having only curiosity for the science of Saints, to learn to live in a good way, and to die; (...)

## THEIR ACCOMMODATION

They are lodged in few infirmary rooms left [by the female religious] (...) sufficient for those who believe that Christian poverty and penitence must reign outside, as well as inside the heart.

#### THEIR AUSTERITY

(...) They sleep on [beds made up of] straw (...)

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*Memoires pour servir...* Vol. 1. xciii ff. [93]



We praise our heroes : Notes, translation of “The School of Vienna at Prague” by Jean Cavailles. – and the limits of our world.

Camille Akmut

**Abstract**

In this highly influential 1935 text, Jean Cavailles, after describing the historical sociological characteristics of the so-called “Vienna Circle”, turns to an analysis of Wittgenstein’s *Tractatus Logico-Philosophicus*, and three of its thesis specifically which he considers to be central to the understanding of their ideas. Vienna Circle : a diverse group of philosophers and scientists, and philosopher-scientists, and scientists-turned-philosophers, from the whole array of disciplines, mathematics to social sciences, that met regularly at the University of Vienna in the 1920s and 1930s until the rise of far-right politics forced them into exile, or killed them. Before Nazism, they organized meetings and talks to make sense of important advances and works of the sciences of their times; discussions out of which emerged theirs, which Cavailles renders here for us.

## Jean Cavailles (1903-1944) : and (V) the end of abstract philosophy and science. (The Duties of Genius.)

Before joining the Resistance and becoming the “*philosopher-mathematician loaded with explosives, a tenacious realist, resolute without optimism*”, as described and immortalized by Georges Canguilhem, and later in Melville’s *Army of Shadows* (1969), Cavailles had made multiple stays in Germany in the early 1930s where he had either learned German or perfected his pre-existing knowledge of it (a knowledge seen throughout the text, where he makes regular references to the original publication of the *Tractatus Logico-Philosophicus*, in German, in 1921).

It was during these early years that he had met German mathematician Emmy Noether in Göttingen (almost universally held to be the greatest female mathematician in the history of that discipline) with whom he later worked on common projects.

Jean Cavailles was 31 years old when “The School of Vienna at the Congress of Prague” was published. In January of 1935, in a major journal of his days. Soon afterwards he was appointed as what may be described as the modern-day Assistant Professor, at the University of Strasbourg.

Following the publication of this article on the Congress at Prague, he went on to publish an edition with Noether of the correspondence between Cantor and Dedekind (both German mathematicians, both made important contributions to set theory) in 1937 (*Briefwechsel...*).

1939. The Second World War meant that certain questions, previously only discussed abstractly by our philosophers, would take on the urgency and practicality of life and death matters, and ceased, and could never be again, and would never be again abstract only. The old large questions : what is a good life, why is there something rather than nothing, all of it, would soon receive their answers for everyone. But, not the same.

In the case of one professor in Freiburg, who had never been, or felt better perhaps, whose cheeks had never been rosier, never perhaps written as much, including many letters about his Jewish colleagues, all the while theorizing about the intricacies of the relationships between Sein and Dasein, while his life itself had been so bottomlessly pitiful : in the case of the queer Martin Heidegger it meant that education and knowledge could be separated from action. – a lesson on education that we know too many of our professors to share.. and, we’d rather not know what if, *if* (the same as now probably, the safest of all possible worlds).

Meanwhile, what can only be rightfully called a hero, ours :

In the case of Jean Cavailles, who had received the best of educations, such tortures of the mind had never occurred.

He didn’t talk. He didn’t try to avoid his responsibilities, he, who, due to his stature, would have had many ways to avoid them we are sure. *We praise our heroes* : We remember them, protect their memory; and keep them, though in that sense only unfortunately, alive. A life cut half.

Preferring direct action over the relative comfort and security of a

previous assignment within the French Resistance, he would not live for much longer... Betrayed, imprisoned along with his sister, tortured by the Gestapo, killed, body thrown away like trash in an anonymous grave numbered 5 – before reaching the age of 40, at 39.

So, died one of the great intellectuals of the past century – a heart of gold without which intellect is consistently, always sterile. – a lesson they have not learned, and perhaps cannot learn. “The limits of our world...”

This all occurred for the same reasons that soon would make it impossible to talk about philosophy at the University of Vienna, and much of the rest of Europe.

In “The School of Vienna at the Congress of Prague”, Jean Cavailles describes also, though unintentionally, the last hours before these many events. A time when Schlick was still alive, a time when philosophy could still be debated and talked about *in abstract terms*, and he was still alive.

A world that would soon cease to exist.

They had robbed an entire generation of Cavailles, a good heart paired with a good mind, but had against their wishes detonated one last bomb of his, a self-defense mechanism or trap of sorts : celebrated as a hero after the War ended – a celebration that does not stop – and while *he* had disappeared, his legacy had not, it became a part of everyone, and was everywhere.

Not least thanks to the efforts of Georges Canguilhem, who during the war had also fulfilled his own duty, as a doctor of medicine, in the Resistance, and wrote a book-length celebration, *Vie et mort de Jean Cavailles* (*Life and Death of Jean Cavailles*, not translated in English, and many of their writings), for the friend he had lost, a friend lost, but not forgotten.

He bore witness. (Like James Baldwin had done for Malcolm X, Martin Luther King, Medgar Evers, all of his friends, who were now also dead.) The importance of this cannot be overstated. While history tends to lend itself to a view of it as a necessity (contingency writes Cavailles), *after the facts*, there could have been many worlds, possible worlds, actualized among all possible ones, where Cavailles would have been doubly robbed from us, killed and forgotten. But, thankfully for all of us, such had not been the case, and no such things happened.

In introducing this text, we made the bold claim “a highly influential text”. Let us explain what we mean exactly now : influences on later generations of philosophers, from Pierre Bourdieu to Michel Foucault, philosophers-turned-sociologists, philosophers-turned-historians-though-not-accepted-as-such, can be seen everywhere, and we mean *everywhere*, in this text.

The reader will take good note when Cavailles writes of “fields” and “spaces” (“The field of relationships between these objects is the logical space...”) and later of “common language”, and when he also variously writes of “discourse”, “architecture” (and more “architectures of truths”), “representation” and “we cannot think illogically”.

His developments on language, time, the limits of our world, logic and history, altogether, all together, were influential; exploded, everywhere.

But, read more, pay attention, and discover more : “As its last refuge – logic – is altogether [radically] sterile, philosophy cannot pretend to the

status of doctrine" (it will only be a critic of language from now on). A guide, a father, intellectual, to all – all who mattered, and listened. And, listen they did. Those who mattered, our (new) new heroes.

We have not yet begun to understand the major role played by Jean Cavailles on so many.

In other ways, this text also most likely contributed to the broad dissemination of Wittgenstein's ideas in France in the 1930s, and in that way, Cavailles, who possessed rare characteristics amongst his peers (the combination of an old, humanistic education paired with a knowledge of science, mathematics in his case specifically, a combination we know to be explosive), and possessed the right mind to identify the right minds, played the role of a pioneer. And, a guide, for all of us, the old and new generations that came after him, and through him, and through them.

But, let's turn to its language, as this text is all about language :

*"We can fix", "other worlds", "different ways", "to respect", "comfort(s)", "starting points", "one architecture can be replaced by another", "(the) last refuge", "incertitudes", "to fight" ("lutte")...*

What a beautiful text. What a beautiful man. A beautiful mind, most. But, most important : a golden heart. (The duties of genius...)

But, one must read between the lines – the interstices of language and history, those that preoccupied the next generation so much. We hope to have done them justice, all of them, here.

This makes it perhaps Cavailles' most important text. Not forgotten!

What we did, precisely : "muddling", and "meddling", and fighting with, and alongside it, and its language, and languages (those of mathematics and set theory), and the equations we did not know before starting, the letters : heartbroken, and heart warmed simultaneously.

We praise those who showed so much courage. In their intellectual lives, in their lives. Detonating bombs on bridges, and in our hearts. Vibrations of which continue to resound ... ..

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For the ease of the reader, and others :

The text is structured in 3 parts : 1. Brief remarks on the historical sociological characteristics of the Vienna Circle as it presented at the Congress of Prague 2. Three theses from *Tractatus* are analyzed by Cavailles and 3. (beginning with page 141 in the original text) The ideas of the Vienna Circle proper, and their divergences from, and novelties compared with, and breaches with 2..

Where we have made errors in rendering the ideas or language of Cavailles, we apologize, but better than nothing, and better than this world, and others may, will build on what we have done. That is all OK. (Hacker ethic above everything. Better than nothing, better than not to start.)

To further clarify our intentions : this most important text is given here in an original English translation, accompanied with notes by the translator and an introduction, *in the public interest*, not just (that of) researchers, computer scientists or mathematicians, social-scientists-turned-it, or whomever else, but in the interest of the wide public and the many varied communities in our society (hackers, freaks, phone phreaks, golden hearts, self-taughts, school drop-outs, squatters, free software developers, writers of songs like “Hattie Carroll” or “Cop Killer”, the old and new one, all of it all, we love you all).

Oh, must our professors resent being associated with them, or to have to even read about them, we can almost hear their teeth grind, and see their faces distort : people they have long ago abstracted themselves from, not found in any of their books, papers that can only be bought. But, Cavailles was *from the people*. Our boy. Dad, military.

That’s not something that they’re going to take from us. Our own.

He too had “muddled” with the “material” of his days. In their bottomless quest for abstraction, they will not be able to abstract this away.

Finally, and, on the other hand : No matter what interests others may have, may claim to be theirs, may claim to be that of the courts, earthly or otherwise divine, military or sham, this text just cannot be taken down.

In producing this translation, we have created many problems, and solved many other ones. (But, you do better.)

## JEAN CAVAILLES

### THE SCHOOL OF VIENNA AT THE CONGRESS OF PRAGUE

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One of the great events of this congress was the first appearance of the “Vienna Circle” in front of such a large philosophical gathering – as a constituted group. At Oxford, M. Schlick<sup>1</sup> had been about the only one to represent similar ideas to that of the “Circle”. At Prague, city of Bolzano and Ernst Mach, the new school, in full, was able to assert the unity of its views, and establish the significance of the results they had already acquired vigorously. The sessions of one of the sections had almost entirely been dedicated to them : the study of their doctrine, the discussion of the problems raised by other philosophies, and, finally, the development of some applications. The ideas of Wittgenstein<sup>2</sup>, we know, had played a major role in its constitution, and contributed, at least in part, to its novelty when compared to that of Mach, of which it otherwise understood itself to be a continuation. Three theses of the *Tractatus* played a major role in this regard. First, language is a reflection of our world, this is to say : the whole of reality is a given, independent from knowledge of which it is merely a description; on the other hand, the latter is a particular case of the general fact that is our ability to represent the universe based on one of its parts. The notion of an establishment of a correspondence plays a central role here : it is defined by the preservation of a system of essential relationships related to its structure, of the model as well as its image. The specifics of the preserved relationships has an effect on the order of the representation : spatial, for instance, if certain geometrical relationships remain. But, there exists one invariant necessary to any image-model pair : the logical articulations of reality. “Any image is also a logical image.”<sup>3</sup>. These relations, that are the most general, are evidenced by the gap between possible and real. The world is a system of actually-existing situations (*Was der Fall ist*<sup>4</sup>), actualized

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<sup>1</sup>Trans. note. Moritz Schlick (1882-1936), birth in Berlin, death in Vienna, physicist under Max Planck-turned philosopher, member of the Circle, assassinated by a former student as he was ascending the stairs of the University of Vienna, the events of which served to bolster the far-right of the time.

<sup>2</sup>Trans. note. The following discussion of the *Tractatus Logico-Philosophicus* corresponds to the best of our knowledge to about a graduate level discussion of this book. It overlaps in many places with that we remember having received at the University of Heidelberg. The faults of philosophical discussions of Wittgenstein (not present here) : all of the underlying mathematics abstracted away as if they did not matter, even though such was never the case and had never been the case for the author, here Wittgenstein.

<sup>3</sup>*Tractatus*, proposition 2.182.

<sup>4</sup>Trans. note. Literally, “What the case is”, and perhaps more clearly, “What *is* the case”.

amongst all other possible situations in a contingent manner : the permanent element, or substance, of the world are the objects (*Gegenständen*<sup>5</sup>) involved in these situations and – though having no more autonomous existence than words outside sentences – holding in themselves the entire world of possibilities<sup>6</sup> of participation with these possible situations. The field of relationships between these objects is the logical space, in the same way as the geometrical space is the domain of varying relationships within that space. As such, logic does not presuppose the actually-existing world, but merely, or more generally that there is a world (5.552). – “The logical image of the world is thought.” (3). But, as thought is in turn projected into language, “the proposition is thought as being able to be perceived by the senses” (3.1), we find here thus an application<sup>7</sup> of the real universe on the universe of discourse [language]; “to objects (*Gegenständen*) correspond the names, to actually-existing relationships the content of propositions (3.22) : “the proposition is a model of reality” (4.01). Out of this two consequences emerge : on one hand, networks of limits<sup>8</sup> between our world and our language : if, “the limits of our language are the limits of our world”<sup>9</sup> (5.6), inversely “the boundaries of logic are also the limits of our world” (5.61). It is equally absurd to picture a world that would exist outside of logic as it is to try to discourse [speak] on something other than the world<sup>10</sup>, be it its boundaries.<sup>11</sup> On the other hand, one ought to distinguish for every proposition between meaning and truth value : meaning embeds it in the space of logical possibles, while truth – or falseness<sup>12</sup> – links it to the system of actually-realized configurations. In a symbolic language<sup>13</sup> – common languages<sup>14</sup> are to be avoided both on account of the ambiguity of their terms and the complexity of their syntax (4.002),<sup>15</sup> – one only meets more-or-less complicated architectures [but they are correct : “we cannot think illogically [outside of logic]”]

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<sup>5</sup>Trans. note. Just, objects.

<sup>6</sup>Trans. note. “virtualité” says the original French text succinctly.

<sup>7</sup>Trans. note. Cavailles qualifies this application as “bi-unambiguous” (“bi-univoque” in the original).

<sup>8</sup>Trans. note. Cavailles here uses the fairly, up to highly unusual, and now antiquated “bornes” (bounds or boundaries) instead of the (now) more commonly used “limites” (limits).

<sup>9</sup>Trans. note. A most famous (and true) quote.

<sup>10</sup>Trans. note. A lesson our professors, who read this text, as they so often do, as a matter of pure abstraction, ought to keep in mind.

<sup>11</sup>Trans. note. Language is everywhere, we cannot escape it. In the end, no matter what field we choose to engage in, it all comes down to language, as one soon discovers – no matter if computer science, mathematics, economics or whatever else...

<sup>12</sup>Trans. note. Not to be confused with falsehood : falseness is the (logical) state of being false, or non-true. (As all of these things are commonly understood within set theory.)

<sup>13</sup>Trans. note. E.g. the language of set theory. (Or, now (modern) programming languages, and before them lambda calculus, the one of Alonzo Church, about contemporary with this text.)

<sup>14</sup>Trans. note. Which we would now describe, as it is done in computer science, as *natural languages* (and before this, we believe, in linguistics, based on the work of Noam Chomsky, and the Chomsky hierarchy). (To distinguish them from programming languages.)

<sup>15</sup>Trans. note. Set theory, as well as programming languages, represent a much more succinct way of expressing relationships between various objects (which are also called objects there, at least in the dominating paradigm of “object-oriented programming” (as opposed to functional programming, where functions are central instead).

of propositions to be verified empirically. There are no other sources of truth.

It is, in fact, the second thesis of the *Tractatus* – necessarily linked to the first anyhow – that purely logical propositions have no content, they are tautologies. “All of propositions of logic say the same things, which is to say nothing.” (5.43).<sup>16</sup> Indeed, it suffices to turn to Frege and Russel, to understand or deepen this. Contrary to what they thought, there are no logical [logic] constants. The equivalence itself of different combinations shows already that they have no independent existence (ex :  $\sim p \vee q$  equivalent to  $p \supset q$ )<sup>17</sup>. But, the notion of function of truth<sup>18</sup> dominates all of logical calculus [*le calcul logical*]<sup>19</sup>. Given a certain number  $n$  of elementary propositions as starting points, there are  $2^n$  possible distributions of the values T and F between themselves<sup>20 21</sup>. If we were to take (let us take) a proposition dependent on these  $n$  propositions, we can fix [establish] the relationship between its truth and those of these  $n$  propositions in  $2^{2^n}$  different ways. For two base propositions  $p$  and  $q$  there are thus 16 truth functions [functions of truth] : for example, the function  $p \supset q$ <sup>22</sup> corresponds to / is an abbreviated notation for the following correspondence [truth table]<sup>23</sup> :

<sup>16</sup>Trans. note. When Wittgenstein was done defending his PhD thesis, in Cambridge, he stood up, walked to Russel, a distinguished man if any, we know, no feeble mind we know, though all the wrong political opinions, tapped him on the shoulder and proclaimed (Wittgenstein who had a hard time dealing with academics, for reasons of his own) : “You’ll never understand.” (This, we believe, is something that can be found in the reference biography by Monk, where everything else can be found as well.)

<sup>17</sup>Trans. note. This is where things start to get tricky, if they had not already been before. But, bear with us. (The mathematicians and computer scientists will move on with their reading.) Cavailles here stresses the fact that different propositions of logic, or logical propositions, can have (about,  $\sim$ ) equivalent meanings. A fact, he sees as meaning they have no independent existence. We do our best here to render the meanings of these mathematical developments :  $p \vee q$  means simply p OR v, in the (succinct, symbolic) language of set theory. This is to say : if one is true, or both are, then the outcome of both is true as well (ex :  $1==1 \ || \ 2==3$  evaluates to **True** in the programming language Haskell). This is also a simple axiom or part of set theory. But, if this is true, and it is, then that proposition is (about  $\sim$ ) equivalent to the other :  $p \supset q$ , the proposition  $p$  implies the proposition  $q$ .

<sup>18</sup>Trans. note. That is literally what set theory is : a collection, or *library*, of functions (most of which of the kind), with inputs (ex : the propositions  $p$  or  $q$  e.g.  $1 > 0$  and  $1000 = 1$ ) and outputs, of truth, and non-truth, etc.

<sup>19</sup>Trans. note. In other words, the calculus, and operations, just described.

<sup>20</sup>Trans. note. “T” and “F” stand respectively for true and false, as is commonly understood to be the case (with)in set theory (language, application

<sup>21</sup>Trans. note. The original keeps with “V” throughout (V for “verite”, or truth/true). In the case of false, there are no such misunderstandings or ambiguities, as both languages overlap, the French and English both say : false, faux...

<sup>22</sup>Trans. note. This is what we were talking about earlier on (in the previous note, just above).

<sup>23</sup>Trans. note. Cavailles keeps talking about correspondence [“correspondance”], who knew what it was, and meant. But, this terminology is then readily reused by our philosophers, and most of all epigones of said philosophers, without any clue of what it means; but this is what anyone would call a truth table. You can search for it. (It’s really common stuff.) (And, explicitly, nothing to be in awe of if you come from the humanities or social sciences. Just open up a textbook, any, really : e.g. ones on “Logic” (philosophy) or “Discrete Mathematics” (computer science) (like the one by Susanna Epp, “with applications”), sometimes also “Mathematical Foundations (of Computer Science)”, and mathematics we don’t know

$$\begin{array}{cccc}
p : & T & F & F \\
q : & T & T & F \\
p \supset q : & T & F & T
\end{array}$$

Any architecture of overlapped truth functions<sup>24</sup> will not have for any other principle than to respect the definitions of intermediary functions and the rules of the calculus of combinations<sup>25</sup>. The fundamental symbols and the rules of their usage is thus arbitrarily chosen following rules of comforts [convenience] : for Wittgenstein, the easiest is the [connex or linked, iterated<sup>26</sup>] negation  $p/q$  (non- $p$  and non- $q$ ). The general expression of a proposition will thus be written like so  $[\bar{p}, \bar{\xi}, N(\bar{\xi})]^{27,28}$ ,  $\bar{p}$  meaning the system of propositions that we start from [we use or take as starting points],  $\bar{\xi}$  the general term obtained through iteration,  $N(\bar{\xi})$  the term following  $\bar{\xi}$  ([connex or linked] negation of all  $\xi$ ). In the system of truth functions [functions of truth] that can be defined for  $n$  given propositions, we distinguish at the two extremities, the tautology and the negation/contradiction [“contradiction”] which take on, the one the value T, the other the value F, whatever values we may attribute to variables. The tautology is useful as it enables simplifications through substitution of one architecture<sup>29</sup> by another, exactly like the equation, of which it is a particular in some other way (Example :  $p \supset q$ .  $p \supset : q$ ). It is a method of zero of sorts (6.121). Independently from its technical (clarification) merits [advantages] (so, for instance, in the case of type theory and the elimination of the axiom of reducibility thanks to the distinction between function and operation), this theory thus enables us to assign its role with regards to philosophy, precisely. As its last refuge – logic – is altogether [radically] sterile, philosophy cannot pretend to the status of doctrine (4.112), it will merely be “critic of language” [language critic] (4.112). Its only goal (from now on), “the clarification of propositions” (4.112). It will limit [bound] itself to fight [the fight] of the constant insurrections occurring in our language, pseudo-problems caused [provoked] by the syntactical incertitudes [uncertainties] of common language : “the

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and don’t care to look up, but you do.)

<sup>24</sup>Trans. note. Again, if you are a philosopher-no-mathematician, stop reading this with your lenses : “overlapped truth functions” is *literally* what Cavailles has done in the previous figure. (There are no mysteries here, and there’s nothing to philosophize about. (Muddle!))

<sup>25</sup>Trans. note. Elsewhere, also, and already : calculus of logic, logical calculus, etc. e.g. set theory, its functions, and “calculus” (i.e. the operations performed, on these various objects, with these various functions).

<sup>26</sup>Trans. note. “connexe iteree”. Here, we, too, have reached the limits of our world, and language : we do not know what Cavailles refers to, but he says what he means in parenthesis. (By “connexe” he seems to be describing bar, this we take from the following passages.)

<sup>27</sup>Trans. note. Lowercase Greek letter xi. (e.g. Riemann Xi function.)

<sup>28</sup>Trans. note. e.g.  $\bar{x}$  is a bar, also referred to as overbar (or overline). “A set stripped of any structure besides order” (Wolfram).

<sup>29</sup>Trans. note. The same architectures (of truth functions!), that he was talking about earlier on, of which he has given one example in the figure.

majority of questions and propositions of [our] philosophers rests on that we do not understand the logic of our language.” (4.003).

(...)

Such was the starting point of the “School of Vienna” (...)



*European hackers* : source documents for the  
history of the Chaos Computer Club, its  
magazine, its conference – I

Camille Akmut

April 7, 2022

(translation, notes, edition)

## The Chaos Computer Club presents itself

The Chaos Computer Club is a galactic association [”*Vereinigung*”] without solid structures [”*feste*”].

After us the future [according to...]: ”hacking” is often described as manifold and varied [diverse] training and Praxis in the correct/true/proper dealing with computers [”*richtigen Umgang*”, ”*Ausbildung*”, ”*vielfältig und abwechslungsreich*” - rev. order].

As much as we are able to, we bring to reality [”*verwirklichen*”] the ”new” Human rights to at least worldwide, free, unhindered and not controlled exchange of information (Freedom for data) among all People and other intelligent forms of life without exception [”*intelligenten Lebewesen*”].

Computers are, in this respect, a precondition [”*Vorraussetzung*”] that cannot be reverted [”*nicht wieder abschaffbare*”]. Computers are objects/things of play, work and thought: but most of all: ”the most important new medium”. Let’s explain: centuries after ”print” media, like books, newspapers and magazines emerged media for global dissemination [distribution] of image and sound: thus photo, film, radio and television. Today’s crucial new medium is the computer. With its help information on ”everything thinkable” in this galaxy can be transmitted and – with the power of reason – emerges something new. The techniques used for distribution are secondary [compared to this].

### Examples:

The Washington Post offers subscribers (and all those with the right password) tomorrow’s articles yet unprinted via computer and satellite, on demand based on key-words. That’s not a ”newspaper” anymore, it’s something new and has – among other things – effects on the profession [of the editor] (...)

In American companies not only new forms of life are being created in computer laboratories, which can also be patented. In the German doctors’ journal [”*Deutschen ärzteblatt*”] a Professor out of Bremen wrote about ”Breeding Human-Animal-Mixed beings for basic work”. A decisive requirement for this are computers and phone line accessible databases with very long DNA lists. The consequences [of this] cannot be fathomed. (...)

### Goals for 1984 and the near future:

0. Collect money for various activities (...)
1. Propagation of assembly instructions and parts for cheap MODEMS (...)
2. Propagation of the magazine ”die datenschleuder”
3. CopyBits, collection and redistribution of all sorts of information on interesting topic circles (...)
4. Creation of various publicly accessible (per phone) databases ”Computer Bulletin Board Systems”, CBBS also named ”free public access systems”

5. Cooperation with already established computer networks, for instance the "association of free public access systems" in England as well as the expansion ["*Ausbau*"] of a similar organization in the German-speaking space.
6. Fun with computers, for example the collection, imagination and gifting of passwords (what password does the Vatican-Computer have ? 666 ? God [*Gott*] ? INRI ? BABEL ?)
7. Collection and propagation of information on phone networks (...)  
(...)
10. Anything that's fun and doesn't cost anything.

CCC

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Trans. notes

Due to, our perception of, the extreme density -and intensity- of the text in part. in the beginning passages, the translator felt obligated to include many annotations that - while they may hinder reading somewhat - should also serve as a constant reminder for readers that this document is probably of the analytical/theoretical kind.

Either our perception of it is correct - and every word was carefully considered - or it was scribbled down one furious night or morning ending having the same effect...

In any case, it is located in the first issue of the first volume (at the beginning?) and seems to serve as some sort of introduction for the rest.

Finally, the German word *Fernseher* has similar connotations of viewing from a distance as its English counterpart: *tele* and *fern* (far), *vision* and *seher* (seeing, actor of) - also found in *telescope* etc.; This becomes relevant for the passage on global image and sound distribution.

## Hardware for hackers

1. Choice of computer (CP/M above everything, obviously.)

Best suited is a portable one. Work on the move, in the telephone booth or something. (Nb: they are all being converted [rebuilt] so that a foreign [outside] computer can call back for identification ! But, that's still two years away.) The Tandy 100, US-version with included modem is really nice, but the Olivetti M10 is cheaper and better. In addition (!) it can be extended by tinkerers to include a 300 baud modem.

However: it [”er” i.e. ”he”] is pretty expensive (1500-2500). Some newspapers and agencies have recognized how useful these things are and use them in their work.

For home use, an Apple clone [replica, ”*Nachbau*”] with Z80 card is the best (in our opinion). (...) (The first Apple building instructions - with Basic program - for phone scanning came out 4 years ago courtesy of TAP). (...)

### Commodore:

(...) In England, plenty of freaks use the VC-64, according to the London Hacker's Club, and hang out in Prestel the British equivalent of Btx.

The software is also floating around somewhere here. Buuut: the VC-64 has a shitty (serial, under 4000 baud) floppy interface [”*Schnittstelle*”]. 15 minutes for floppy copying is too long.

And: the hardware is fairly unstable: to do night work (Bulletin Board Systems etc.), it's not suited. (...)

CP/M start (Control C) [”*Warmstart*”] on Apple only takes a few seconds, on a Commodore almost a minute. (...)

### Remains Atari.

The hardware is more stable and better thought out [”*konzipiert*”], but not much faster (...)

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Trans. notes

Followed by lengthy discussions of the BTX network, which we also skipped whenever it appeared before.

In magazines and ads of the time the Model 100 was most associated with the business elite and applications such as reports or letters (e.g. *Computer User*'s issue 2 obsession with private jets/first class flying, or the ad with the female staff who works ”remotely” due to her boss ”JT”), while hackers - like those evoked, in London and at the CCC - evidently had other plans, uses for them.

## European meeting of computer hackers [*Computer-Chaoten*]

[The local press called us "the hyenas amongst computer experts", in a 7th of March article. This follows the publication of our four-page *Datenschleuder*. One month after these events... :]

this week-end, at the noble Sheraton Hotel in Frankfurt, "the hub of Europe" the creme of the hacker scene meet for a "Euro-Party". Member of, and organizer of the party: The King of the American hacker community, and "inventor" of hacking into outside ["*fremd*"] computers, 29 year-old Cheshire Catalyst.

For a 10 dollar entry fee, and a special overnight price of 162 DM for a single room (instead of the regular 315) the hacker conference is open to all the friends of the byte and the baud. The computer hackers [*Computer-Chaoten*] probably won't be able to stretch out alone in the swimming pool, for the community isn't that big after all, and moneyed either. A lively exchange between those who operate computers and those who break into them (...) should nonetheless be possible at the bar or during dinner, when the manager and the hacker, around a beer, meet. Indeed the American organizer and publisher of TAP hasn't come here to the city of banks on his own costs; he was invited by Munich "Leuro-Institut" to speak before the collected flock of managers, who worry about their data on magnetic tapes [in the millions of bytes], worried about secret weapons blueprints just as much as the publication of their gains. Profits or Swiss account status. In a seminar on the topic "Manipulation and computer security", Mr. Data-thief will report on his assessment of the illegal international data trade.

Consultants[speakers] in the seminar, to take place on the 9th and 10th of April in the capital of Bayern at the feudal Holiday Inn, in no way inferior to the Sheraton, will include the "hacker" as well as gentlemen ["Herren", has also "lords" for meaning] who have made the fight against living room-computer criminality their profession: Dr. Blunbecker [will be of the party] and Munich State computer expert Paul. (...)

For: "Security" over data[bases] is no doubt the most important keyword for these gentlemen, who, in its name, will go through the hassle of long journeys and stressful congresses (...)

In the past, "security" and "Order" [*Ordnung*] were often used in the same context. Today, that is old-fashioned. The "communication revolution" makes it (im)possible. If yesterday, wars were fought over land, today battles are fought over even the tiniest of information advantage. (...)

And, wasn't it supposed to be all about the yet unwritten, and all the more important human rights of the future: the right to free, uncensored exchange of information. (...) "What the big companies are doing (in their case, gathering mostly illegal information outside of German laws' reach inside databases that remain nevertheless phone line-accessible) so do we; that information - which can include information on how to get information/break into computers - can be duplicated just like photocopies but is

much faster to access... and also seize." - a CCC member states.

"Data protection" is also done in hacker circles. In the December issue of TAP, the American "magazine for the communication revolution", Hacker-Chief [*Ober- Hacker*] Cheshire Catalyst mentions another reason for the Hacker- Euro-Party. Addresses of TAP subscribers are not shared; a hindering barrier when it comes to sharing experiences among them. CCC sees things the same (...)

Dieter Metk

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Trans. notes

*Computer Chaoten* appears throughout which we sometimes translated as merely "computer hackers", and at other times felt could be translated more specifically to mean "a member of the CCC"; "Computer anarchists" might be a valid translation, too.

Descriptions found here, such as "*king of the American hacker community*" or "*inventor*" appear a bit dubious in retrospective.

Note the book retracing the history of "hackers" and re-rooting the concept in its original setting i.e. academic circles around places like MIT or Berkeley in the 1950s, 60s (against dominant journalistic fashions) was published the same year as this article [*Hackers*].

## Excitement among hackers for European summit

Regarding the Hacker-"Euro Party", here some information from the "CCC": the "Euro-Party" is to take place at the Sheraton-Hotel, Frankfurt/Airport. The conference begins Saturday 7th of April in the conference rooms. On Sunday the water rats meet in the swimming pool.

In order to settle preplanning of the rooms for film viewings etc. please contact the Chaos-Computer-Club ASAP (...)

Please mention the TAP conference [for reduced room prices]. Single-double-triple-quad rooms, if one wishes to exchange ideas and save [money]. Staying with friends is cheaper, but you'll miss a night of hacking. (...) Don't forget your computers and modems! The phones of the Sheraton await you!

"Datenschleuder" No. 2 will appear on time for the conference, in addition there will be some interesting photocopies.

## Entry exam

Dear people,

in taz - right after the double page dedicated to hackers from 8 weeks ago - there was an ad by the CCC. (...) [In short, there was a mess up during the phone call, so here it is again.]

Entry examination for the C.C.C.:

We are looking for a program, in any programming language, which fulfills a "recursive" exercise: it should, when running, output the source code (itself). Trivial solutions (possible in some BASICs) like

```
10 LIST will not be accepted!!! Hints:
```

```
10 PRINT"10 PRINT"
```

also won't work, because on RUN it will only output

```
10 PRINT
```

and thus will display something else. Also

```
10 PRINT "10 PRINT";CHR$(34);"10 PRINT"
```

etc. won't help. Understood?

## Literature list [#1]

(...)  
05 Doppelseite Hacker, taz 8.11.83  
(...)

## Did you know...

- two suitcases full of magnetic tapes are enough to hold ALL (national) census data?  
[*Volkszaehlung*]

- floppies can be photocopied

(...)

- the whole US defense industry depends on ca. 8000 Pentagon [large scale] computers,  
and a million individuals are "allowed" to have "secret" access to them ?

(...)

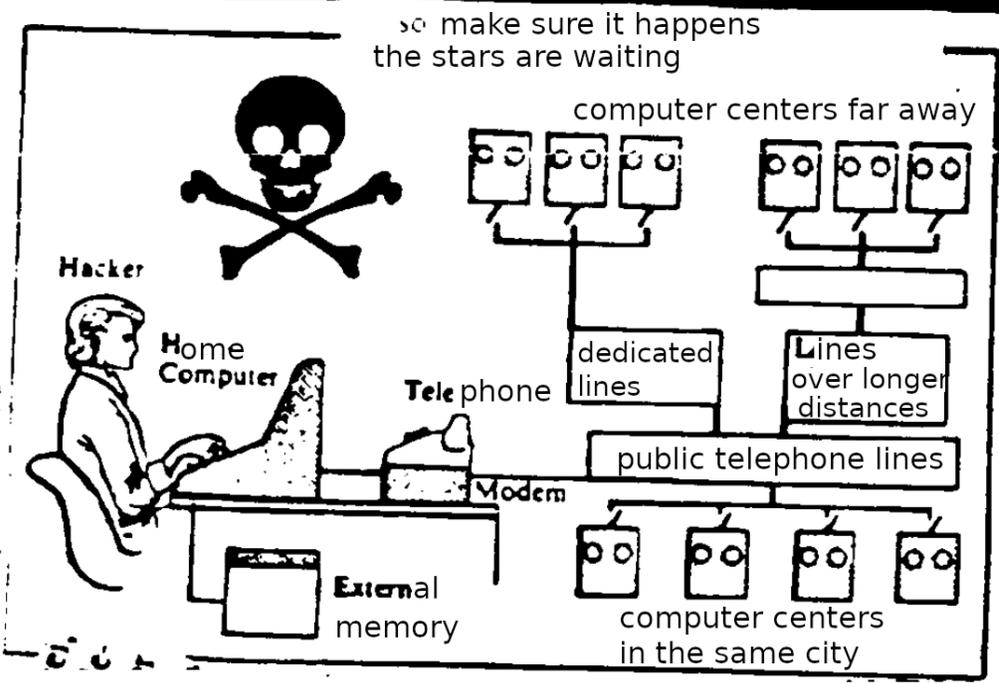
## untitled [publisher note #1]

Finally! the first issue of "datenschleuder" is complete. You are holding it in your hands (...) we received more than 100 orders already. There are more hackers than we hoped, after all. Ever though women are a minority by a ratio of 1:8, it's still something. The magazine - depending on your participation - will appear every 4 to 8 weeks and will be four A4 pages, similar to TAP. (...)

## Forgetful? [#2]

Imprint: (...) The information [*Infos*] is published with no regard to patents, weather or other circumstances, and are meant for education [purposes]. (...)

# OPPORTUNITIES FOR THE HOME computer



II. [translated] *die datenschleuder* issue 1, p. 2 ("Chancen fuer den Heimcomputer")

Diese Ausgabe enthält Beiträge

- Hardware für Hacker
- Telefon: Wählprüfnetz und Abhören
- little bits from hacker's club
- Grundsatzblabla (typisch deutsch)
- Literaturliste
- Kleinkram

Chaos Computer Club c/o Schwarzmarkt  
Bundesstr. 9, D-2000 Hamburg 13

## die datenschleuder

Öffentliche Mailboxen in der Bundesrepublik.  
 TEDAS- 089 596 422 vom FRANZIS-Verlag auf einem Epson QX-10. Der Service wird von der MC-Redaktion mit dem Hintergedanken betrieben, damit „die Redakteure . . . auch künftig bei der Kommunikationstechnik mitreden können“ (Herwig Fe.). Die Mailbox bietet ein ausführliches Menü, ist jedoch auch mit einigem Datenmüll gefüttert (Biorhythmus). Die eingegebenen Meldungen sind erst nach einem Update, einer Kontrolle, für alle User zugänglich. Eindringlinge in das Interne System waren laut Anfrage noch nicht zu verzeichnen; TEDAS benutzt keinen konstanten Code.  
 DECATES- 06154 51433 von DECATES Computeranlagen GmbH Ober-Rammstadt auf einem Televideo. Der Rechner dient der Firma als Ferndiagnosesy-

no. 2 apr 84

In den USA gibt es etwa 150 000 (!) Mailboxsysteme. Und entsprechend Erfahrung. Daraus entstanden umfangreiche und qualitativ gute Mailbox-Programme. Es ist ärgerlich, wenn jede Mailbox anders funktioniert. Das erfordert Umdenken und ist zeitaufwendig — hohe Telefonkosten. Viele unterschiedliche CBBS (Computer Bulletin Board Systeme) haben sich deshalb auf einen gemeinsamen Standard geeinigt. RMI ist z.Z. das einzige System hier, das danach arbeitet. Hoffentlich ändert sich das! RMI will das unterstützen, indem es das Programm gegen eine Schutzgebühr weitergibt, genau

II. contents *die datenschleuder* issue 1 / title issue 2

## HOT NEWS, or what we hear [#2]

(...) - The well-known password JOSHUA should be avoided. Some hosts (computer) react so aggressively that they shut down the connection. The passwords VISITOR or GUEST can be recommended at this point. Many VAX-computers (large computers of the company DEC) have a guest mailbox.

- (...)

## European meeting of computer hackers

„In Europa ist die Hacker-Szene einfach ein paar Jahre hinter den USA zurück, und da kann ein Informationsaustausch schon weiterhelfen“, begrüßen die Hamburger „Chaos-Computer“-Leute Cheshires 'Europa-Party'. „So ein Treff ist eine gute Ergänzung zu einer Zeitschrift, denn manches läßt sich schließlich – was ja wohl leicht einzusehen ist – nur mündlich machen“.

Dieter Metk

Hacker aller Länder, vereinigt  
euch Seite 5

Mittwoch, 4.4. 84 **taz**

[ending] "In Europe, the hacker scene simply is a few years behind the USA, and an exchange of information can actually help there", "Such meetings are a good complement to a magazine, for some things ultimately can only be done personally/by speaking, should be obvious"; "Hackers of all countries, unite"

## #3 : new design, sub-title



**Die Datenschleuder**

Informationendienst zu den Problemen von Datenschutz, Datensicherung und Ordnungsmäßigkeit der Datenverarbeitung

**messen & prüfen**

immer wieder an den Tatort zurück. Und er kam. Mit >social engineering<. Da in dem Dialcom System ein genaues Verzeichnis aller Teilnehmer und ihrer Telefonnummern ist (schon alles auf Floppy!), konnte gezielt vorgegangen werden. Dazu

Mail-Boxen mit dem Grossen Bruder  
Der grosse Bruder ist immer dabei!

Sub-title : *Informationendienst zu den Problemen von Datenschutz, Datensicherung und Ordnungsmäßigkeit der Datenverarbeitung* [latter upside-down]

Information service on issues of data protection, safeguarding and the proper handling of data

## User manual [hacker glossary]

A reader wrote : Could you please explain the following terms, which I have found to be difficult to understand while reading your articles, or recommend a book? "NUA, ID, SEL, FTZ, BKA/VS, Password Overlay, Sys-Op, Datex-P, PAD, NUI, RMI, MUPID, Update, Online, File Menu Directory, recent callers, Prestel, Bulletinboards, Voice, dbase2, scannt, Logoff, Chat, Gilb, CEPT, Loewe-Decoder, shipping refrigerators to alaska" [verbatim]  
We get such demands very often and recommend that, when reading DS an English dictionary be kept at hand, a beer or some other drugs (...)

Besuch	Visit	Should uninvited guests come over to seize floppies, do not mention the ones smeared in syrup (...)
BIT		[ <i>Bruchstück</i> ] Fragment, computer science. The theoretical least amount of bullshit.
Btx		The greatest failure of the DBP. (...) More under SHIT.
BYTE		American spelling of BEIT, short form for <i>BasisEinheitText</i> [BasicUnitText]. Corresponds very approximately to a letter.
CCC		Center of the galactic post association. Also verification [test] site for distant messages bodies. (...)
CEPT		see Bastian R.'s article
CHAT		Hackers babbling.
CPM		Chaos per modem. Operating system for 8080/Z80 computer.
DBP		[ <i>Deutsche Bundespest</i> ] German federal pest. The yellow danger in one's own country [nb. yellow is the color associated with the German federal post service, <i>Deutsche Bundespost</i> ]
DS		You're looking at it! [i.e. <i>Datenschleuder</i> ]
<i>Geduld</i>	Pa-	a required quality when it comes to CCC orders. If uncertain, complain.
tience		
HACK		<i>Hochentwickelte außergewöhnlich chaotische Kommunikation</i> lit. trans. : highly developed extraordinarily chaotic communication trans. 0 : highly advanced-and-chaotic communication knowledge trans. 1 : high-development, amazingly chaotic (k)ommunication trans. 2 : high anarchist communication knowledge trans. 3 : highly advanced chaotic communication capabilities

---

### Trans. notes

Instead of answering the questions directly, perhaps due to the (uncertain, legal/illegal) nature of the material, perhaps due to a certain vision of their world, CCC provides obfuscated, humorous and subversive definitions - typical for the original culture of hackers (i.e. play with language, visible in the CPM entry for example<sup>1</sup>, or the HACK definition which is itself a hack based on first letters).

In doing so, they were possibly influenced by similar glossaries or dictionaries published before in English (e.g. *The Hacker's Dictionary* or 'jargon file').

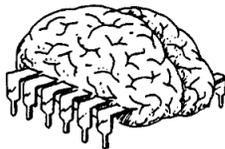
HACK, as defined, is difficult to translate not only due to the usual problems of translation (precision vs. meaning vs. mood), but also because the output language, English, has a phobia for k-first letter words (*Kommunismus*, and everything, you see)... [alternative propositions : kamikaze, kernel. kids]

---

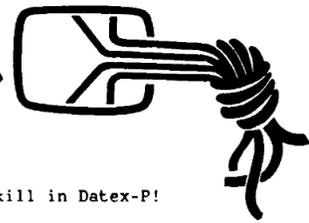
<sup>1</sup>CPM does not stand for "Chaos per modem"..... (at least not officially, and that is the point : making official the unofficial, legal the illegal, illegal the unjust but legal, etc. etc.)

# User manual / hacker glossary [continued]

IBM	I'm Bored and Mighty tired [ <i>Ich Bin Müde</i> ]. Bold Improvements in Manual operations [ <i>Immer Besser Manuell</i> ]
Modem	Tandy makes the cheapest. But, currently it is only available in Belgium and can only do 300 baud. Also the Belgian ones are not approved, despite being identical.
PAL	[ <i>Problem anderer Leute</i> ] Not my problem, pal
Pswd.	Gives the owner headaches, and is also a source of much problems for the hacker: the secret password.
RS	[ <i>Rechnerstützer</i> ] Support. A profession with a bright future (...)
S131	For I=0131000 to 0131999: Dial: Piep-300Bd:Next.
SHIT	a spontaneous call by a RS or IBM engineer (...)
SysOp	SystemOperator, something like President [ <i>Bundeskanzler</i> ] but for computers. (...)
TAP	" <i>Technological Advanced Projects</i> " [verbatim]. US-American magazine. Role model for DS (...)
Tbx	Telebox. State-controlled mail box.
Wahl Election, secrecy	A historical relict, since data processing.
YoYo	nickname of the principal Btx computer in Ulm. Constant on and off. (...)



## Die Datenschleuder



Polizei im Untergrund, CCC nicht!  
Einigen scheint es Spaß zu machen,  
uns in eine kriminelle Ecke zu  
drängen. Manchmal (wie im Fall der

Rechts-um! Rechts-um! Rechts-um!  
Ausgehend von den SPD-regierten  
Bundesländern ist eine handstreich-  
artige Änderung der Lage für ge-

Don't kill in Datex-P!

Some people park in Datex-P

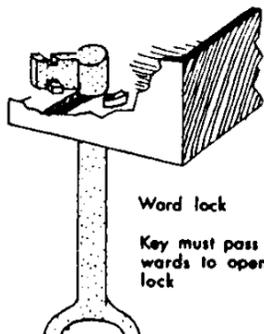


Seit dem 1. September rühren wir in  
der deutschen Btx-Suppe.

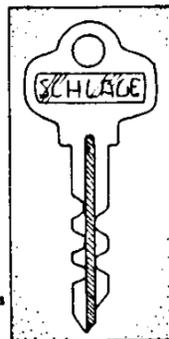


Blitzbriefdienst der Schneckenpost  
Der 50 Baud lahme Schnellbrief-  
dienst Telex brauchte einen Nach-  
folger. Ein geiler Name ist ein  
guter Start: TELETEX. Auch die

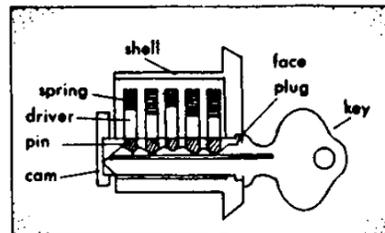
INTERPRETATION OF THE INTERFACE  
SIGNALS BY THE D-BT  
Dein Gerät steuert's DBT03 m



Word lock  
Key must pass  
wards to open  
lock



Schlage key  
with all or  
no cuts



Il. issue 5-6 ("doppeldatenschleuder") title, var. illustrations

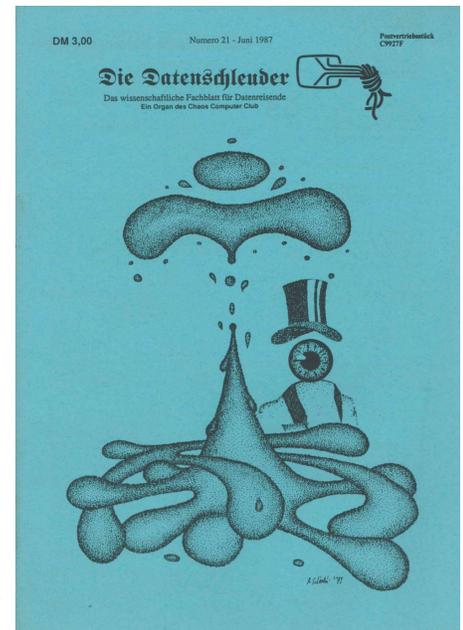
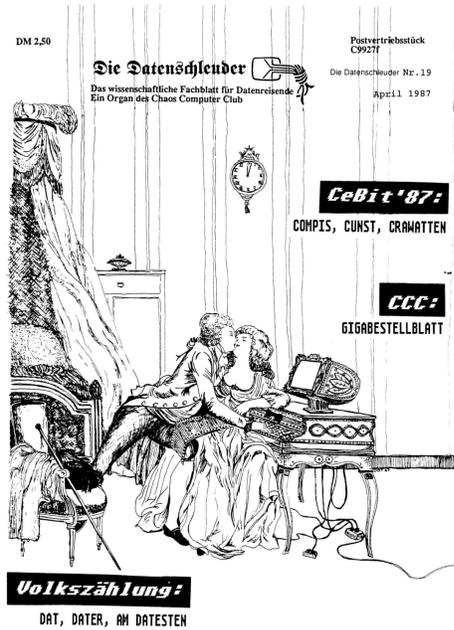
# untitled [introduction, editorial] #5-6

It seems like some take a mean pleasure in pushing us into a criminal corner. Sometimes - as in the case of Funkschau [German magazine] - it's just laughable. If we recall, you were the ones who published the first assembly instructions for an \_illegal\_ Modem... Out relationship with the law is like so : (...) As a side note, we send our issues fresh from the presses straight to the LKA Munich. We don't run to the police when someone parks wrong, be it in the streets, or Datex (...) but if someone is [in life danger] being knifed on the Reeperbahn [area with a reputation for brawls, prostitution and "illegal" activities] then we do. (...)

Our self-understanding is that of a Robin Data. Greenpeace and Robin Wood put the interests of the majority in front of specific regulations when necessary. (...)

## CCC tells...

The world is increasingly automated and machine operated (by others). Computers and robots. In particular the new communication technologies create new structures, and have deep impacts on our life [and development]. These technologies provide us with specific processes that are intricate and not readily transparent. (...) Die Datenschleuder tries to give help to those who are not yet online. In printed form you can there find news about electronic media (...)



II. early covers issues 19, 20 ("the number e"), 21

Brief notes on the evolution of DS :

- half-cover (17), three-quarter or full cover (18, 19, 20), color (21, 22...)
- "The scientific journal for data travelers" becomes the new sub-title in 11-12, 13 (small variations)

## Die Datenschleuder contents

### #1 Jan. 1984

<i>Der Chaos Computer Club stellt sich vor</i>	Presentation
<i>Endlich! Die erste Datenschleuder</i>	Finally! The first issue
<i>Hardware des Hackers</i>	Hacker's hardware
<i>Die Hackerhymne</i>	The hacker hymn
<i>Aus dem Briefkasten des CCC gefischt</i>	From the mailbox of the CCC
<i>Aufnahmeprüfung</i>	Entry exam
<i>Das Wählprüfnetz. Ein Sonderdienst der Post.</i>	A special service of the Post
<i>Wußtet ihr schon, daß...</i>	Did you know...
<i>Impressum</i>	Imprint

### #2 April 1984

<i>Öffentliche Mailboxen in der Bundesrepublik</i>	Public mail boxes in the Bundesrepublik
<i>Europäisches Treffen von Computer-Chaoten</i>	European meeting of hackers
<i>Die Vorfreude der Hacker aufs europäische Gipfeltreffen</i>	Excitement among hackers before European summit
<i>Falsche Namen, echte Ausweise</i>	Fake names, real IDs
<i>Hot News / Kurzmeldungen</i>	Hot news / short announcements
<i>Zwei Monate Modembetrieb ohne Offenbarungseid</i>	2 months of anonymous modem use
<i>Kurz-Info zum Thema DATEX-P</i>	Brief information on the topic of DATEX-P
<i>Subversive Tricks</i>	Subversive tricks
<i>Goldfinger: Dialog aus einem Film über Hacker...</i>	Goldfinger: dialogue from a film about hackers
<i>Impressum</i>	Imprint

### #3 June 1984

<i>Champagner für Hacker</i>	Champagne for hackers
<i>Mail-Boxen mit dem Grossen Bruder</i>	Mail boxes with Big Brother
<i>Verbraucherschutz im Bildschirmtext</i>	Consumer protection in Bildschirmtext
<i>Sicherheitsgrundlagen im Datex-P Verkehr</i>	Security basic in Datex-P
<i>Was man in einer Mailbox so machen kann!</i>	All the things you can do inside a mail box
<i>Parken und testen in Datex-P</i>	Facts and testing in Datex-P
<i>Ein Hacker hinterlaesst keine Spuren</i>	A hacker leaves no trace
<i>BTX heisst Bildschirm-TriX</i>	BTX means Bildschirm-TriX
<i>Weltpostkongress in Hamburg</i>	World congress
<i>Das NUA-Telefonbuch</i>	The NUA telephone book
<i>Kurzmeldungen</i>	Short announcements
<i>Impressum</i>	Imprint

Open Networks – Why?

# Chaos Communication Congress '84

on 27th/28th of December 1984

Eidelstedt town hall,  
Elbaug street 12, 2000 Hamburg 54,  
10am-18pm

What today still sounds like a fairy tale may very well become reality tomorrow. Here is a fairy tale from the day after tomorrow. There are no copper cables anymore. There are only fiberglass and terminals in every room, now. We sail on foreign computers. Mail boxes are like living rooms. With speeds unimaginable today computer clubs speed through data networks. One of these clubs is the **Chaos Computer Club**. A small part of a gigantic security system, which protects the Earth from dangers (...) Let's follow the CCC in their adventure of the edge of the unknown.

CCC '84  
after Orion '64

THE meeting for data travelers! Telephone, Datex, Btx, Mail box service, Telex, radio data transmission, video presentation

Active workshops, video & paper copiers

Entry : Kids 20 DM  
Girls 10  
Misc. 30  
Post 10% discount

[banking details]

**Bring passport photo!**

Co riding central beginning 26.12, 10am

[phone details]

**Offene Netze – Warum?**

# **Chaos Communication Congress '84**

**am 27./28. Dezember 1984**

**Eidelstedter Bürgerhaus,  
Elbgastraße 12, 2000 Hamburg 54,  
10.00 - 18.00 Uhr**

Was heute noch wie ein Märchen klingt, kann Morgen Wirklichkeit sein. Hier ist ein Märchen von Übermorgen. Es gibt keine Kupferkabel mehr. Es gibt nur noch die Glasfaser und Terminals in jedem Raum. Man siedelt auf fernen Rechnern. Die Mailboxen sind als Wohnraum erschlossen. Mit heute noch unvorstellbaren Geschwindigkeiten durchheilen Computer-Clubs unser Datenverbundsystem. Einer dieser Computer Clubs ist der **Chaos Computer Club**. Gigantischer Teil eines winzigen Sicherheitssystems, das die Erde vor der Bedrohung durch den Gilb schützt. Begleiten wir den **CCC** und seine Mitglieder bei ihrem Patrouillendienst am Rande der Unkenntlichkeit.

CCC '84  
nach Orion '64

**DAS Treffen für Datenreisende! Telefon, Datex, Btx, Mailboxbetrieb,  
Telex, Datenfunk, Videovorführung.**

**Aktive Workshops. Video- & Papercopiers**

Eintritt: Kids	DM 20,-
Girls	DM 10,-
Sonstige	DM 30,-
Post	10% Rabatt

**Voranmeldung durch Überweisung  
auf Postgiro 46 26 90-201 PschA Hamburg  
Sonderkonto M., S. Werne&1ry**

**Paßfoto mitbringen!**

**Mitfahrerzentrale am 26.12. ab 10.00 Uhr**

**Telefon 570 3812**

II. (above) Chaos Communication Congress '84 announcement, DS #7 - 1984

II. (below) selected footage from 18C3 [i.e. the 18th edition of CCC] - 2001



Talks, events	Speaker	Notes
"DRM comes to European digital TV"	Seth Schoen	"December 29" per presentation
"Tor and China"	Roger Dingledine	(mostly a typical Tor presentation, with some examples adapted to include e.g. female Chinese workers)
"MMORPGs. The state and future of the World of Warcraft"	Joi Ito	(administrator from MIT)
"Hacking the Electoral Law"	Ulrich Wiesner	"27/12" per presentation
"The worst part of censorship is. Investigating large-scale Internet content filtering"	Sebastian Wolfgarten	(China, obviously, again)

## Claim

- In Germany (and other countries), the administration turns fundamental election principals into their opposite, without parliamentary authorisation.
- They have, effectively, hacked the Electoral Law
- The "Hacking Tool" they use are voting computers.

## Flavours

- Voting Computers
  - DRE (Direct Recording Electronics)
    - With or without paper trail
  - Optical Scanners
- Remote e-Voting = Internet voting
  - Vote casting from private PCs over a public network
  - Just picking up
    - Estonia: Launched for regional elections 2005
    - Pilots in Switzerland since 2004

II. "hacking the electoral law", Ulrich Wiesner : presentation pp. 2, 4



II. "DRM comes to European digital TV", Seth Schoen / "Tor and China", Roger Dingledine presentation p. 69

[Nb. this conference - taking place after Christmas and before the new year - remains notable as the one attended by Aaron Swartz just before being fired by Reddit (bastion of liberalism and humor's lowest form, irony). See, e.g. the blog entries "Welcome to the Panopticon" (/ccccon), "Berlin" (/23c3) from Dec. 2006 and Jan. 2007]

[Chaosknoten]

Aus Bärnin:

Chaos Info Pages  
**Aktuelle Meldungen: e schluss**

[Pesthoernchen]

**Chaos Computer Club**  
 Hamburg

[ccc@ccc.de](mailto:ccc@ccc.de)  
<http://www.ccc.de>  
[Usenet.de.org.ccc](http://Usenet.de.org.ccc)  
 Btx: \*CCC#

*Weitere Adressen...*  
*Die Datenschleuder...*  
*Die Satzung...*

[Blue Ribbon Campaign]

© 1995/96 Chaos Computer Club

73891. GagaBananas

HTML-Design von [winni@ccc.de](mailto:winni@ccc.de)  
 Technik [tw@mlch.strasse.com](mailto:tw@mlch.strasse.com)

II. <http://www.ccc.de> on Oct. 31 1996 (first capture Internet Archive)

# Chaos Computer Club e.V.

**KABELSALAT IST GESUND**

"I am chaos. I am the substance from which your artists and scientists build rhythms.  
 I am the spirit with which your children and clowns laugh in happy anarchy.  
 I am chaos. I am alive, and tell you that you are free"  
 - Eris, Goddess Of Chaos, Discord & Confusion



**save the heart of gold**  
**join the chaos communication camp**

**Das Chaos direkt ins Postfach** [CCC knackt RC5-64](#) **Real hackers do it with security**  
[Chaos Update](#) [Current Ranking: 41](#) <https://www.ccc.de>



II. <http://www.ccc.de> May 1st 1999 (last capture 20th c.) /  
 Chaos Communication Camp 1999 "heart of gold" space ship in need of repairs on Earth [r.]

\*\*\*

Primary sources

[berlin.ccc.de/Archive/Archive.html](http://berlin.ccc.de/Archive/Archive.html)  
[ds.ccc.de](http://ds.ccc.de)  
[media.ccc.de](http://media.ccc.de)

## Introduction to the documents

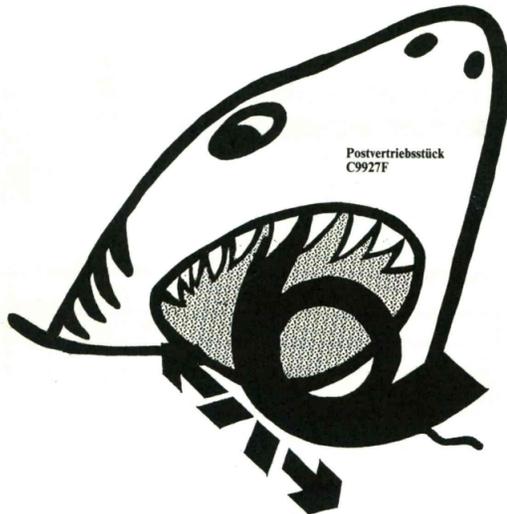
In the 24th century, will "galactic" historians write about the Chaos Computer Club as the most legendary of all hacker groups? As the ones who, not only started many of the conventions of their culture but also the ones who - among many bright stars - were the brightest by combining social concerns, legal expertise and technical virtuoso abilities from the very start? Possibly, probably.

Just as Latin and Greek are requirements to tackle many aspects of Ancient civilizations, in the same way the world of European hackers presents specific challenges : strange abbreviations - Btx, Datex... - and a hatred for the postal service that appears equally astounding at first sight, but becomes rapidly familiar to those who persevere [CCC's hacker glossary is the best entry point].

The *Bundespost* (but they prefer "Bundespest") ran the network used by these hackers (Btx), in ways that obviously did not meet their high expectations, ideals.

Their principal demand is free access to information. But, in the age of computer information that presents many opportunities and problems: They insist on printing their primary vehicle of communication - a magazine called *Datenschleuder* - on paper, so that *on paper* people can learn about the electronic media, independently from them...

Their rage against the German postal service has few bounds and is found throughout the magazine in its early stages (most of 1980s). Here another example,



II. *Datenschleuder* 17 cover

European phreaks and hackers in Germany hated the Federal post service, like American ones loathed *AT&T* (monopoly, "funder of the Vietnam war", etc.). The two communities were communication partners: The "Euro-Party" in Frankfurt was maybe the first "hacker con" (in the bankers' capital, of all places).

In many of their articles the CCC warned of profound transformations and a rising asymmetry in the, so-called, "communication revolution", celebrated by others while they remained cautious, caustic and clear-minded..... : in the promised land of freedom they saw surveillance of the people, and continued obscurity for the powerful.

In their illustrations, female hackers sit peacefully at desks hacking into 'far away' centers of data. In their vision of the future, it is the people who are powerful!

in this fight they are aided by the home computer and modem - like hammer and sickle..

Against better odds, those called hackers persevere. Worst of all, they have fun while doing so. And, *much, much* worse, their relationship to knowledge and education is chaotic and kind.

*European hackers* : History of the Chaos  
Computer Club... – II

Camille Akmut

April 9, 2022

(translation, commentary, edition)

**summary** Its magazine, conference, and other activities circa 1983-2006.

## Advice for pirates [#8]

(...) we don't feel like having anything to do with the business of software trade [*Softwarehandelsszene*], because we want FREEWARE and not bartering [*Tauschhandel*]  
(...)

---

Trans. note : "Freeware" in all-capitals and English in the text.

Written at about the same time as GNU was organizing : members of that community created a much more sophisticated and developed philosophy beyond, mere, freeware, i.e. free software.

## Wandering hackers

In the past, journeymen [*Handwerksgesellen*] set out on varied trips and learned from masters [of their craft] in other cities and countries. During their, sometimes short jobs they exchanged their collected experiences with their hosts. If there was no work, they received food and money for their continued journey. Today still some of them are out there. Since then they get 5 DM from every master who has no job for them [at the time of their arrival].

These are the ancestors of hackers. They travel worldwide data networks. During their journeys on foreign computers - instead of accommodation, meal and reward - a little computing time and some data.

---

Trans. note

CCC reminds of the "journeymen" to extend the history of hackers past common place, simple narratives (bounded by "computers", implied electronic ones). "*Artisans were mobile by tradition (the old journeyman system)*" (Braudel Civ.&Cap.2), "*The work of a London journeyman baker begins ... at about eleven at night.*" (Marx Cap.1 ch10)

## Squeeze, unsqueeze and scramble

The three programs that the professional hacker cannot do without.

The CPM freak knows them as squeeze (SQ), unsqueeze (USQ) and scramble. They are made available by the C-Usergroup as freeware. With squeeze you can compress any file without loss of information, unsqueeze to restore them, and with scramble files can be encrypted. (...)

## Public appearances [#9-10]

The media has taken an interest in C3's activities. It was really interesting to know TV, for once, from the other side. On the one hand, one gets to know people like Grzimek and gets to understand seriousness. We didn't know that his movies were censored in the '60s. And, then, [on the other hand] a member of C3 landed in a, nasty, commercial talk-show by regional television WDR. These people exclusively invite guests from outside [their state/area]; as otherwise no one would come. Who else would participate was only announced shortly beforehand. Surely, they take whoever walks in. The show manager, Röhre Braun, had Jo Leinen come on. Once the show began he addressed him as "the first green Minister for the environment". But, Jo is from the SPD. They arrange a cross-country taxi trip. Poetic. A green-painted taxi (...)

---

Trans. note

SPD is the Social Democratic Party, whose closest equivalent in the US are the, so called, "democratic socialists" : but whereas the former in Europe are not mistaken for something else than they are, i.e. a center-left party\*, the latter pass for "radicals", even "dangerous" .., (hence the need for the preposition, "democratic", as if saying socialist wasn't enough - whatever that word means to them)

[\*unshakable belief in capitalism, shared with their colleagues from the CDU, only divided on irrelevant issues]

## Chaos Communication Congress was chaotic ['84 report]

Already during networking installation the chaotic spirit was strong. 8 km of cables were divided across six rooms, an attempt which appeared to succeed after 10 hours and many tobacco varieties by the kilo [? *Kilo Tabak*]. (...) The photocopiers were finally delivered. An hour later the first subversive writings were being duplicated. By the end of the congress 15.000 copies had been made.

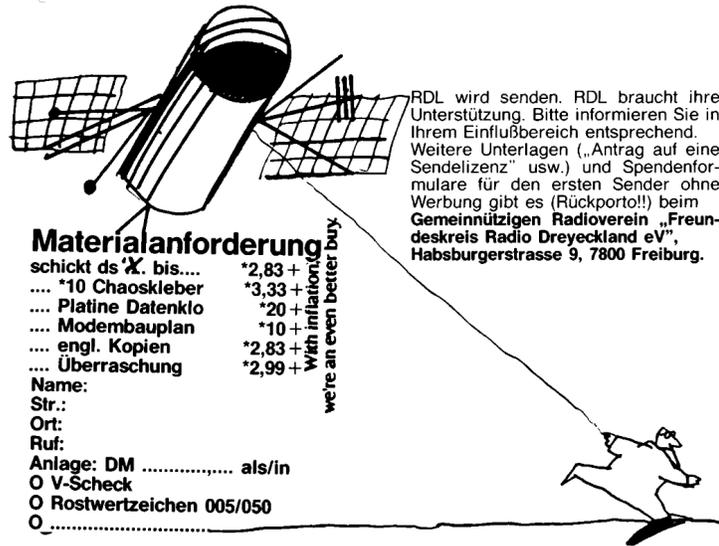
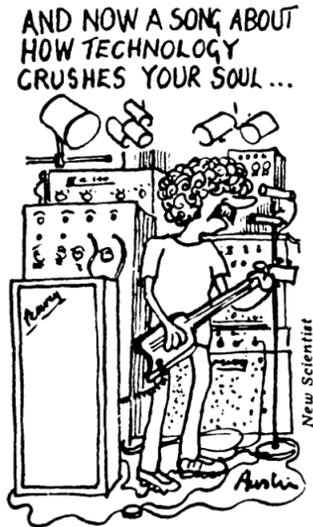
At that point the first visitors were already trying to get past the entry door and storm the entry hall. But, we remained strong. On time with 10 minutes delay, the doors opened, one of the first areas people rushed to was the hack center (right next to the entry), to try out the noble art of hacking (...) In the auditorium the first workshops and speeches began (...)

[Back] At the hacking center, some hard-working hackers gained access to a major institution's computer, through pure chance (we, naturally, DON'T mean the Haspa !!) (...)

During the night leading to the second day, a circle of night workers was constituted (...) At the other end of the line was DELPHI-VAX Cambridge/ Mass. After beginning difficulties in establishing a connection, our American friends helped out and completely new perspectives arose. Dana and Robot (our international alibi) explained during a 4 hour long session what a VAX was and did (...) The next day, the State supervision [arrived] (...)

---

Trans. note : One of CCC's mottos is *Kabelsalat ist gesund*, a "spaghetti" of cables lit. a "salad" is healthy. Haspa should be the local bank (shortened).



II. *Datenschleuder* illustrations issues 13 / 9-10 [modified for clarity i.e. some text removed]

## Bildschirmtext: electronic censorship [#11-12, Btx]

Bildschirmtext - a new medium - has now a new feature : the electronic censorship. On public Btx devices, program offers by various providers, among them for example the Chaos Computer Club, are not available anymore.

In order to protect the public from publications by "undesirable" information providers, book burnings are not necessary anymore.

### The new media enable censorship on the touch of a button.

The electronics company SEL presented 85 new Btx machines at the fair in Hannover. They are meant to be installed in post offices, airports, administrative buildings, banks etc. At that fair censorship methods were already demonstrated. (...)

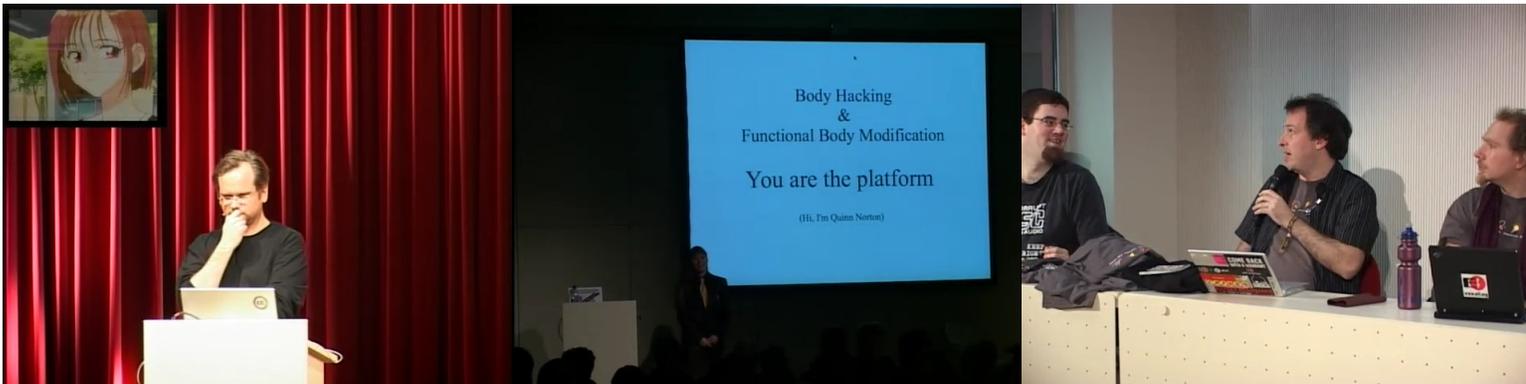
Other than CCC, other media critical programs were shut down. The Btx program of the Greens [*Die Gruenen*, pol. party] was not locked as they are currently not a provider. When we contacted the manufacturer we were told that this was a new feature [Leistungsmerkmal]; with it up to 100 programs could be shut down. But, that is not censorship [they explain]. We deny that by affirming that Btx is a "new medium". Such restrictions need to be opposed from the earliest moment.

We indicate to these manufacturers that such software is incompatible with fundamental laws / *Grundgesetz*. Licenses to operate must be removed.

Trans. note : besides the book burnings of the 1930s in Germany, "unnatural art" was banned (entartete Kunst). (e.g. Beckmann's *Still Life with Saxophones* per Staedel's provenance notes - which is both funny and tragic... Something about luscious saxophones triggered Nazi sensibilities. And, homoerotic motifs, their expertise area)

23C3 notable events (continued)

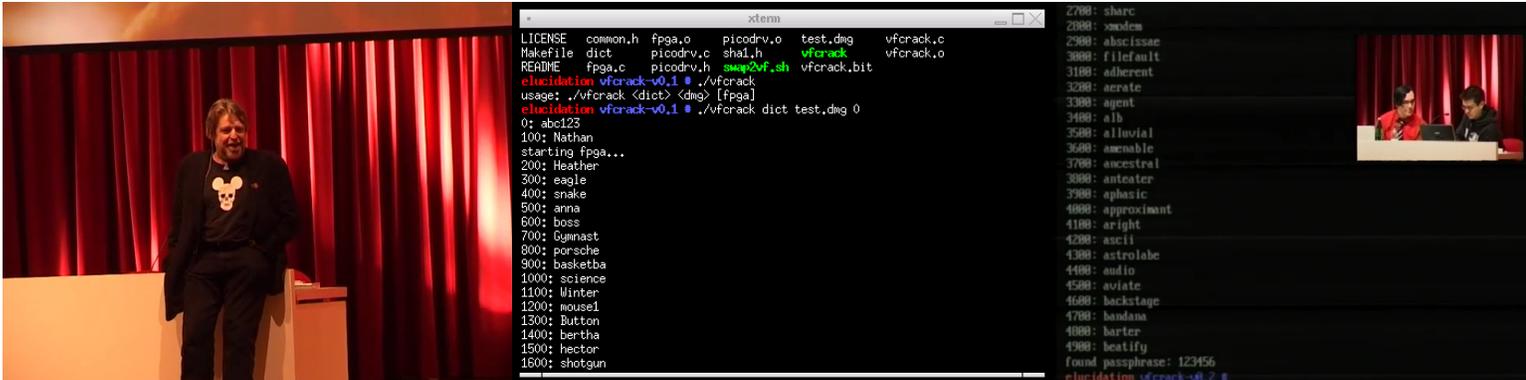
"Body hacking"	Quinn Norton
"On Free, and the Differences between Culture and Code"	Lawrence Lessig
Keynote	John Barlow
"Tap the Electronic Frontier Foundation. EFF staffers answer your questions!"	Peter Eckersley, Seth Schoen, Danny O'Brien
"Black Ops 2006 Viz Edition"	Dan Kaminsky
"Project Sputnik Realtime in-building location tracking at the 23C3"	Harald Welte, Milosch Meriac
"Unlocking FileVault. An analysis of Apple's encrypted disk storage system"	Ralf-Philipp Weinmann and Jacob Appelbaum
"Pornography and Technology. A love affair"	Tina Lorenz



II. Lawrence Lessig and anime / Quinn Norton, suit and tie / Itr Seth Schoen, Danny O'Brien, Peter Eckersley of EFF



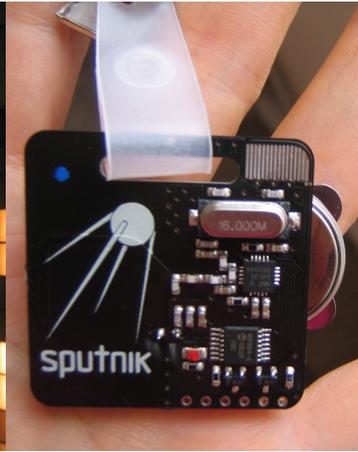
II. Dan Kaminsky ("Director of Penetration Testing") / Milosch Meriac; demo (id="249727" time="11..." distance=")



II. John Barlow, skull Mickey Mouse shirt / Weinmann, Appelbaum demo vfcrack (presentation p. 24) found passphrase:



Space ship [Golden heart?] and skull Post flag[?] in background / close up, desks [6-7]



couches, chairs, rugs (hackers) / art-technology experiment (projector) area / "sputnik" detail [3-5]



Aaron Swartz holding "sputnik" [1] / Milosch Meriac, Brita Rausch-Meriac, Harald Welte [2]

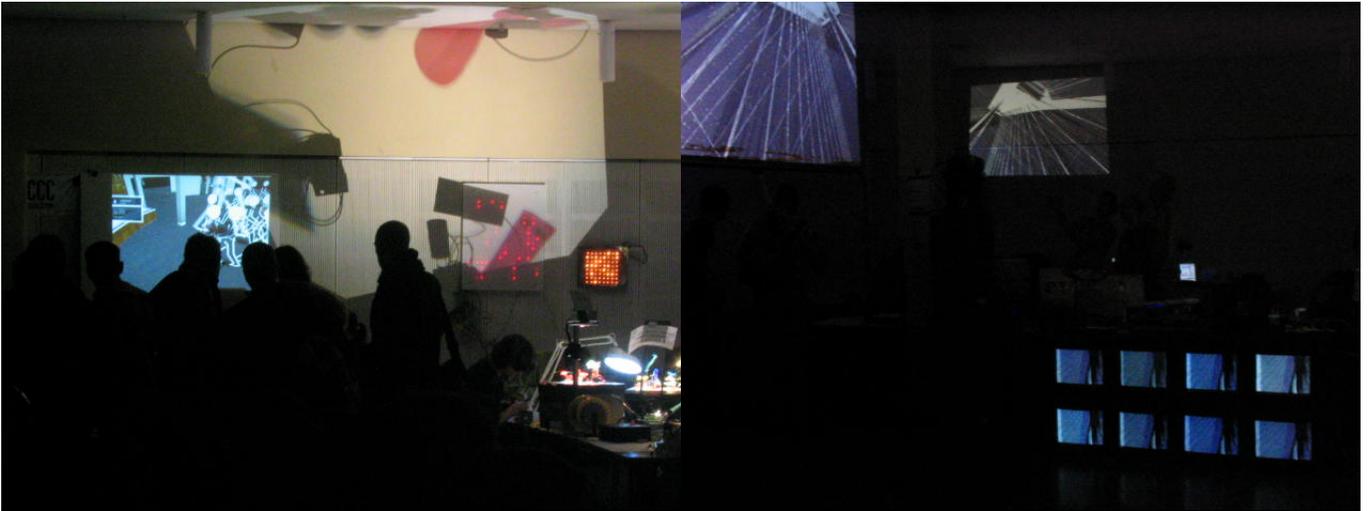
[1-2] Quinn Norton flickr.com/photos/quinn/ CC BY 2.0

[3-5] Régine Debatty flickr.com/photos/nearfuture/ CC BY-SA 2.0 [3] a modification for privacy i.e. black front row

[6-7] Jonas John flickr.com/photos/jonasj/ CC BY-SA 2.0

[1] 335715321 "December 27" [2] 337594149 "December 29" [3-5] "December 27" [6-7] "December 30"

tracking visualisation (left) / "DJ set" per photographer's legend [8-9]



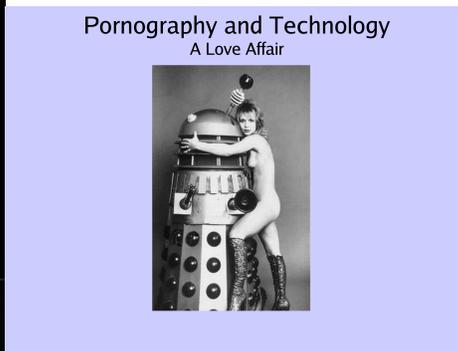
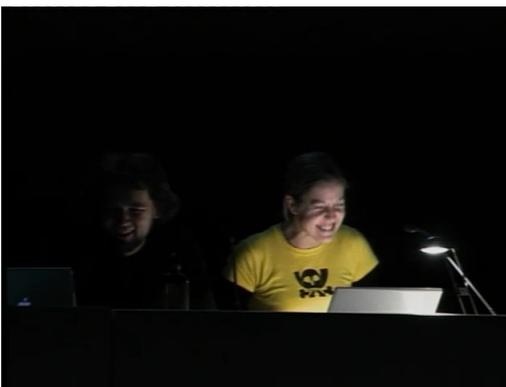
23C3 ("Who can you trust?") was a special conference in that it gathered a cast of notable figures, or who would become so later on - among them many friends of Aaron Swartz.

Quinn Norton covered it in Wired (Hacker Con Submits to Spychips, Dec 28, 2006 2:00 AM),

*"One thousand attendees of the Chaos Communication Congress voluntarily wire themselves up to RFID location-tracking devices. (...) Every few seconds, each of these "CCC Sputnik" badges reports its owner's position to an array of 35 monitoring stations, and [outputs] every move over a public XML feed. (...) Quinn Norton (ID 254135) and Wired Digital's Aaron Swartz (ID 254260)"*

One installation interface let visitors see in a 3D graphical visualization where these "sputnik" equipped attendees were. This included ID and corresponding moving or resting 'stick figures'-like representations.

Aside from this, it also benefited - conforming to the CCC's tradition - from various talks that stood out through their catchy mix of sociology, history and technology : in "Pornography and Technology" interesting statistics were shown (e.g. "60% of p2p traffic", 1% of randomly sampled sites are "sexy"), in the second iteration of "Biometrics in Science Fiction" -begun in 22C3- fingerprints on glasses and improbable scenes were a recurrent theme, for example.



II. "Biometrics in Science Fiction", Roland Kubica and Constanze Kurz / T. Lorenz presentation

[8-9] La Petite Claudine flickr.com/photos/lapetiteclaudine/ CC BY-SA 2.0 [9] "December 27" [8] "December 28"

## Chaos Communication Congress '85. The European hacker party [#14]

From 27th to 29th of December, the Chaos Computer Club in Hamburg will organize its annual fair, this year. The meeting for data travelers, telephone freaks, data paths and Btx search trees finders, of Sysops, radio freaks and net flaneurs has for motto "You are allowed" [*Du darfst*, not can *kannst*]

The name is a reference to a law that is supposed to come into effect at the beginning of next year, which would criminalize even accidental connection, through a mistake of the Post, to a data base. (...) In theory it should help against financial criminality, but the topic is so complex that hackers could get caught as side effects. Are we to expect a rise in criminalization of children bedrooms because of this? Will companies then too be criminalized? In fact a game is being sold by one with the title HACKER and the marketing "Suddenly you are in a foreign computer...".

A positive development can be announced: circa 250 mail boxes (bulletin boards) are on line in the Bundesrepublik. (...) SysOps do not only make sure that bits and bytes flow correctly and that their computers operate as well as phones, but act also as a sort of publisher, for they shape and give their services an identity. (...)

That is why 28th of December has been declared Day of SysOps. (...) an association of SysOps will be founded for common good due to their importance (...)

Friends from other countries (so far: AU, CH, F, GB, S, USA) will tell of trends in their respective countries. (...) In the Chaos-coffee shop we will offer self-made bakeries. Photo- and video copiers await information - please bring interesting things - and the hack center will still be there. In the auditorium we'll have workshops (talks, discussion etc.), max. occupancy 99. We will best the CHAOS of last year! There won't be much parking place though because on Friday and Saturday the local market will be happening. We recommend taking public transportation, S-21/S-3 to Elbaug street. (...)

Note that bringing photo cameras or recorders to the fair is forbidden for privacy reasons! [data protection, *Datenschutz*]

## Children are chaotic beings [anarchists] [#15]

They constantly escape the scenarios that are written for them, destroy the fundamental order of development (...)

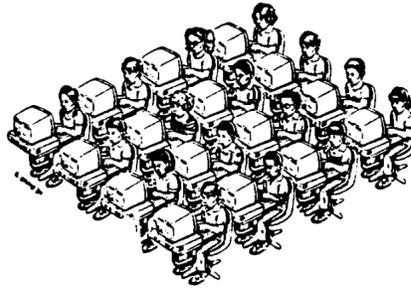
[Institutional Education doesn't happen with children. School teaching has lots in common with trench warfare. Both parties have entrenched plans. (...)]

## Freedom can be learned

"Computers are to be in the hands of the people!" When this demand was formulated in 1976 it was revolutionary. Come now, 1985, and the home computer market is saturated. Few know how to achieve mastery with them, while others after months of labor are elevated, yes happy-beyond-belief for having implemented the household costs on a C64. (...)

Is fear before computers a tool for mass control? (...)

II. issue 15 illustration [previously translated passage added]



**Ist die Angst vor dem Computer ein Erziehungsmittel für Massengesellschaften? Abso, wenn ihr**

## Book reviews : Hackers Steven Levy [#15]

(...) A detailed discussion is supposed to follow, but let us say a few things here about hacker ethics :

1. The access to computers and everything that can be known, such as to make sense of the world, should be unhindered and extensive. The ability to participate as a principle is true everywhere.
2. All information should be free of cost [*gratis*].
3. Distrust authorities – promote decentralization.
4. Judge hackers based on their actions, not on deprecated criteria like diploma, age, race or status.
5. You can produce beauty and art with a computer.
6. A computer can change your life positively

(...) The delivery took 4 months and cost 90 DM. (...)

## Statutes of the CCC [#16]

### Paragraph 2 Aim and purpose [non-profit / common good]

(1) Our Club promotes and supports initiatives relating to Research, Science & Education, Art and Culture (...)

To do this, the means will be :

1. regular public meetings and exchanges of information.
2. organization of or support for international events (...)
3. Publication of the magazine "Datenschleuder".
4. public work and publishing in all media.
5. work and experience sharing circles.
6. exchange of information with the organs responsible for data protection / privacy.
7. hacking.
8. help and counseling for our members within the frame of the law.

### Paragraph 3 Membership (...)

### Paragraph 5 Membership revocation

A member can have their membership revoked if they tarnish the reputation of the club, if they don't pay their membership fees or when another important reason is given. (...)

II. 23C3 : play [10]. 22C3 : logo/design



22C3

Much of the ground for 23C3 was laid in 22C3 : many speakers overlapped, while the origins of the popular "sputnik" gadget can be seen evolving from here. And, while the official keynote was given by Joi Ito (at the time, still, everyone's darling from Berlin hackers' creme de la creme to Massachusetts finest intelligentsia), the talk "We lost the war" holds a punch that Ito probably never could find within himself at any point in his life. Why? Everyone's friend is no one's friend. His 2km long CV in the end made no difference. A lengthy quote from that other, unofficial keynote :  
*"they need to prepare for a state where two thirds of the population will have no meaningful labor, but something that maybe earns their rent - but only maybe. (...) Also, what we see is the energy crisis. We can talk about whether it's 5 years or 10 years, but the end of fossil energy is there. Which means that society will need to develop alternatives (...) We also see that there are disruptive technologies on the horizon (...) today under the banner of "fight against terrorism" is nothing but preparation for an ever darker future, in the minds of the people who govern us. (...) In the end we will have a never ending state of emergency. There will always be some terror on-demand, that keeps up the fear. There will always be the next big scare that justifies the next law to further reduce our freedoms."* Dec. 2005. If we lost, then because we seemingly learn nothing.

"We lost the war. Welcome to the world of tomorrow"	Rop Gonggrijp, Frank Rieger	
Keynote	Joi Ito	
"RFID - overview of protocols, librfid implementation..."	Harald Welte, Milosch Meriac	(summary before 23C3 implementation)
"Towards the first Free Software GSM Phone"	Harald Welte	"Reverse Engineering the Motorola EZX..."
"Internet Voting in Estonia"	Tarvi Martens	"Tarvi [is] the project manager for Estonian e-voting"
"Black Ops Of TCP/IP 2005.5"	Dan Kaminsky	
"The Future Challenges for a Hacker"	van Hauser, Dan Kaminsky	
"A discussion about modern disk encryption systems"	Jacob Appelbaum	File Vault is mentioned in presentation among "attempts to solve some of these problems"



**E-stonia ?**

- Population: 1.35M
- Everyday Internet usage: 54%
- Internet banking: 86%
- Mobile penetration: 95%
- 1000+ Free Internet Access points
- **PKI penetration: >65%**
- **Biggest national eID card roll-out in the Europe !**

II. Harald Welte "RFID overview" / "Biometrics in Science Fiction" / Martens "Estonia voting" presentation p. 2

Primary sources : - [10] Public domain flickr.com/photos/stiefkind/ - events.ccc.de (e.g. sub-domain fahrplan)

*European hackers* : History of the Chaos  
Computer Club... – III

Camille Akmut

April 11, 2022

(translation, commentary, edition)

## Hacker meetings

Note :

Starting at least issue 17, conferences and other relevant events (in Germany) were announced by the CCC in the *Datenschleuder* prominently, after the front-page, under the title "*hacker meetings*".

For the 1987 it listed 8 "*important appointments*".

Apart from its own annual fair, as usual set after Christmas, and member's meeting [*Mitgliederversammlung*, 18/04], it promoted events taking place in the other major German cities that are Hannover (CEBIT), Koeln, Berlin (IFA) and Munich (SYSTEMS).

## Jobs

Wanted, 1:

- Accountant [Book keeper]
- Data entry [typist]
- Programmer in C, Pascal, Basic, 68000 Assembler
- Chief secretary
- Post handling/processing
- Archivist

However this should not be understood to mean 6 individual people, but only ONE capable person. The record so far is held by someone who lasted 46.983 seconds in that position. We are an ambitious association of *Computerchaoten* [hackers] on the look out for those problems we already have solutions to.

We offer :

- comfortable work setting in a humid environment.  
(...)

We expect :

- no talking back [*keine Widerrede*]

Applications were expected no later than yesterday in the hands of the redaction. (...)

## Forum on viruses, a documentation in 5 parts

A magazine recently came to the conclusion that, "A virus inside an operating systems is among the worst things for a data processing system." [trans. note : *DV*, most likely Datenverarbeitung] (...)

Viruses emerged in freeware (programs to be exchanged) in Western Germany [*BRD*], from the USA (...)

### 1 History

The terminology "computer virus" was coined by Len Adleman at the University of Southern California in the context of Cohens experiments. A computer virus is a program that has the ability to infects other programs. Every time a virus is activated (for example through boot up an infected system) it copies itself into other programs. (...)

There is something problematic with using terminology from biology for happenings of technology. The catch-all term "virus" [*Sammelbegriff*] describes a specific form of organic structures which can only multiply through a specific type of cells in the host [*Wirtzelle*]. A certain resemblance to computer viruses exists in that they also need a "host program". But, even though the comparison is not quite adequate/on point [*stimmig*], US scientists have decided to go with terms such as "viruses". "infections" (...)

### 4 Legal aspects

(...)

#### Criminal law

The most important issue for developers of viruses is the criminal law aspects of their doing. (...)

### 5 Perspectives

(...) Essentially the question is this:

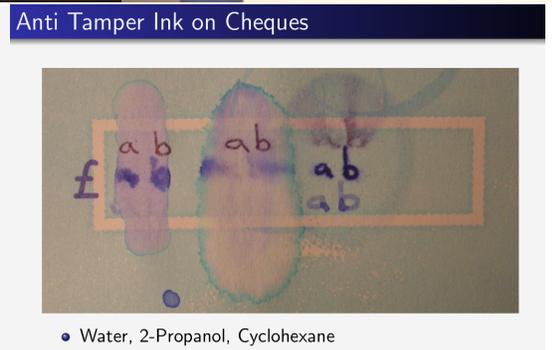
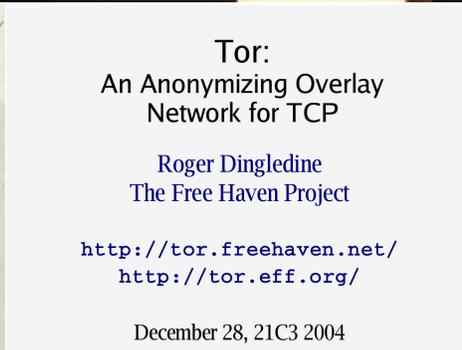
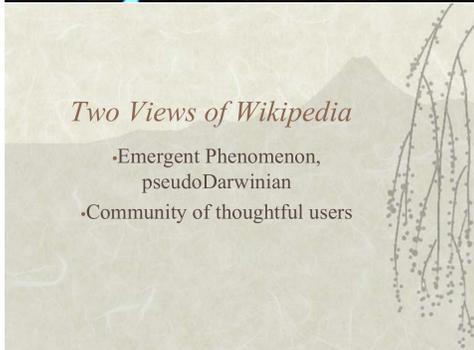
How far can politics of information go? By publishing SOURCE-CODES\*, do we expose ourselves / make ourselves liable to the accusation of propagating assembly instructions for bombs of logic? [Logic bombs]

---

\*Trans. note : verbatim.

21C3  
(notable talks)

Speaker	Talk	Comment
Jimmy Wales	"Wikipedia Sociographics"	
Roger Dingledine	"Tor. An anonymizing overlay network for TCP"	(first?) Refers to the paper "Tor: The Second-Generation..."
Emmanuel Goldstein	"Protesting in the new Millenium. The Use of Electronic Communications to Protest"	
Joi Ito	"State of Emergent Democracy"	
Dan Kaminsky	"Black Ops of DNS"	
Steven Murdoch	"The Convergence of Anti-Counterfeiting and Computer Security. Reverse-engineering currency detection systems"	
Harald Welte	"Enforcing the GNU GPL. Copyright helps Copyleft"	
Daniel Bartlett	"Automated Hacking via Google"	"A look at methods of locating vulnerable sites via google..."



II. Wales / Goldstein, holding i.d. / Murdoch / Wikipedia, Tor, Counterfeiting presentation sheets

II. 21C3 trailer



In the 21C3 trailer the following terms appear:

Linux; Elektronik; Instant Messaging; Kryptographie; Biometrie; Robotik; Philosophie; Verschwörungstheorie\*; Literatur; Linguistik; Betriebssysteme\*\*; BSD; Patente; Urheberrecht\*\*\*; Embedded Systems; Data Mining; Privatsphäre; Softwarepatente; Netzwerke; Programmiersprachen; World Wide Web; Lock Picking; FPGA; Medien; Security; Chaos Computer Club; Arts & Beauty; Mathematik; TCP/IP; Peer To Peer; 23; Propaganda; Phishing; Machines; Wiki; Bluetooth; Haecksen\*\*\*\*; Pixel; Nummer; Freedom.<sup>1</sup>

—which can be understood to be specific to this edition of the conference (i.e., they are "the usual suspects") or to correspond to the topics that are generally of interest to the CCC. In the final act, a more intricate animation happens consisting of a rainbow color path circling before imploding while in the background the terms are reconstituted.



The international orientation of the CCC, existing since the beginning (see the Datenschleuder), is ever present with terms appearing, alternatively, in English and German or translations e.g. bilingual welcome messages as in 21C3.

### 22C3 (photographic archives)



II. Snowed space ship / "22C3" construction toys / Pirate Bay / OpenBSD ("A Secure [OS] For a Hostile Internet") / light installation (1st floor) / lockpicking area / dark room (again in 23C3)  
*"Meet the Pirate Bay and Piratbyran for an open discussion about copyfighting, the future of BitTorrent and more.."*

[5-7] Régine Debatty flickr.com/photos/nearnearfuture/ CC BY-SA 2.0 [5] 27/12 [6] 28/12

[1-4] heipei flickr.com/photos/heipei/ CC BY-SA 2.0 [4] one modification for privacy i.e. black front row [1,2] 29/12 [3] 28/12

<sup>1</sup>trans. : \*conspiracy theory \*\*operating systems \*\*\*copyright \*\*\*\* Hexe, witch. also sounds like hacking(low-German?)



II. issue 18 DS / 21 C3 illustration "Anti-Honeypot Technology" talk

## Fuer eine handvoll Daten [# 18]

(...) At the Insitute for informatics of the University of Hamburg many extensive studies have been conducted in the last months which show that the data gathered during the 1987 national census [*Volkszählung*] is not, against the constitutional's court express provisions, "factually anonymous"; on the contrary they can be de-anonymized quite easily. We use the - probably new - terminology of DATA OWNER [*DATA INHABER*] very consciously here to make clear that in an information society, too, there must be a fundamental [constitutional] right to self-definition. And, that starts with a right for everyone to define who collects data about him [*ihn*] and makes use of them.

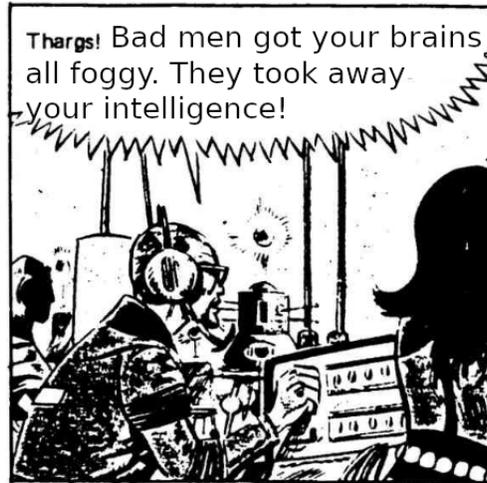
The experiments undertaken under the supervision of the Professor Klaus Brunstein show with what terrifyingly simple methods it is possible to make of the supposedly anonymous, that is individually-independent, data that is again personally identifiable. (...)

---

Trans. note : a likely reference to the classic spaghetti Western *A Fistful of Dollars*: in the Sergio Leone/Clint Eastwood series one recurrent theme is betrayal. (Contrary to the classic Western it showed the protagonists in ethically questionable actions.)

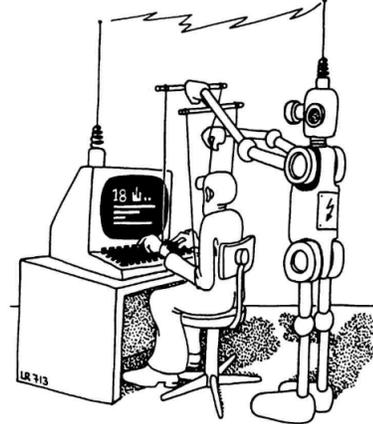
About the concept of "data owner": a critique has since taken place which rejects privacy conceived as a sort of entrepreneurial "I control who gets to deal with my data (against money or some benefit, implied)". But, in the 1980s it was a revolutionary text, probably.

Progressive voices today reject this "Libertarian" conception and seem to advocate as minimal collection as necessary (i.e. for the functioning of a State, in societies that rely on it) over a capitalist-compatible, Silicon Valley amenable micro magement of one's data.



Il. issues nineteen [translated] / twenty [number "18" on the screen]

**Auffällig ist bei uns  
das Unauffällige.**



## For a few data more

In the last issue of the *Datenschleuder* we showed how supposedly anonymous [statistics..., see 18]

Here is an example of how the State apparatus functions when it comes to sensitive data : in the wake of the fight against AIDS the federal government [*Bundesregierung*] had decided a file [*Datei*] be created in which all HIV-positive individuals would be recorded anonymously. In fact whether name (as in the national census) nor address of the individual were included. Instead there is an identifier [*Kenndatum*] in the file to prevent duplicates. This identifier is composed like so: postal area of the affected person, meaning the first the first two digits of the postal code, then date of birth, followed by every third letter of the first and last name, as well as the length of both names. That can look like, for example: 2056i8h9.

That might look pretty and obfuscated, but it is still a fairly description of the affected person (...) According to the information of Prof. Brunstein (computer scientist, Univ. HH) it is possible, based only on the list of addresses in Berlin, to narrow down to 10, starting from 1.3 million addresses, after which remains only to narrow down by age.

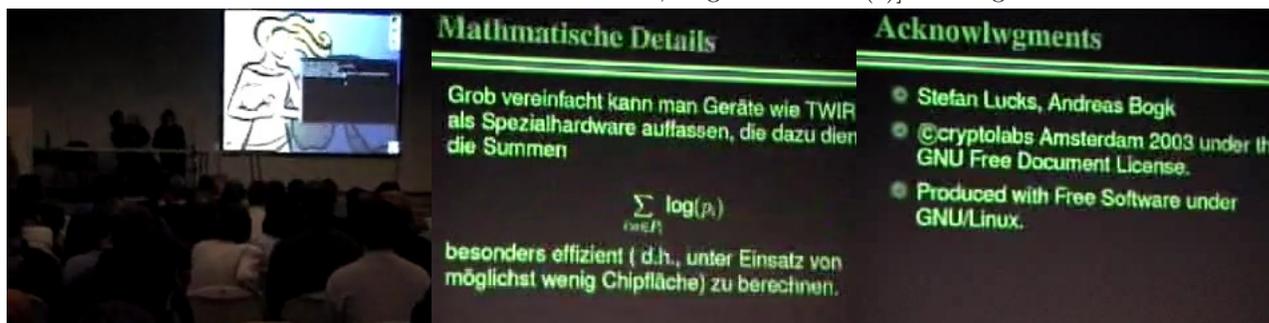
(...)



Il. 20C3 opening : Frank Rosengart, Tim Pritlove, Andy Müller-Maguhn, Andreas Bogk [ltr]

**talks**

Xbox Hardware Hacking	Andrew "bunnie" Huang, Michael Steil	(another talk dealt with software hacking)
Reverse engineering linux based firmware images	Harald Welte	
Biological Weapons	Florian Burckhardt	'Biological WMDs are the poor man's nukes and are among the justifications for US-led "regime change" and a gradual rollback of civil rights (exchange freedom for security). ...', Link: <a href="http://www.threatbusters.org/">http://www.threatbusters.org/</a> , Dur.: 2h
1024 bit RSA is unsafe	Rüdiger Weis [per 20C3 site, Bogk also there (?)]	Based on Shamir / Tromer 2003 ["Factoring Large Numbers with the TWIRL"?)



**other activities**



[left] Blinkenlights / [right] Haecksen \*

Primary sources : [events.ccc.de/congress/<year>/overview.en.html](http://events.ccc.de/congress/<year>/overview.en.html) (e.g., 2003 for 20C3)

\* [Detail "XX", ref. to chromosomes (?)]



II. 22C3 opening : presentation sheets 4, 5 and 6

24C3 (notable talks)

"Open Source, a capitalist movement"	Tomislav Medak, Toni Prug, Marcell Mars, Dmytri Kleiner	"The Open Source initiative re-interpreted Free Software to include it into the neo-liberal ideology and the capitalist economy..."
"Analysis of Sputnik Data from 23C3"	Tomasz Rybak	
"Hacking SCADA : how to own critical infrastructures"	mayhem, Raoul Chiesa	
"Space Communism. Communism or Space first?"	Oona Leganovic, Daniel Kulla	(Marx, Star Trek etc.)
"Relay attacks on card payment: vulnerabilities and defences"	Steven Murdoch	"\$500 worth of off-the-shelf hardware, two laptops and moderate engineering skill is all it takes."
"A Spotter's Guide to AACs Keys "	Peter Eckersley	"AACs is the DRM system used on HD-DVD and Blu-Ray discs. It is one of the most sophisticated DRM deployments to date."
"Current events in Tor development"	Roger Dingledine	
"DNS Rebinding And More Packet Tricks "	Dan Kaminsky	

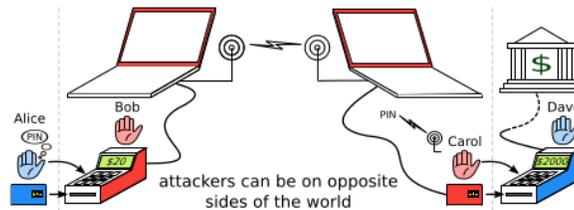


## SCADA Security Standards

- BS7799-ISO27000** Information sec. management systems – Specification with guidance for use
- ISO/IEC 17799:2005** Information Technology – Code of practice for information sec. management
- ANSI/ISA S.99.1** Security for Manufacturing and Control Systems
- ANSI/ISA SP99 TR2** Integrating Electronic Sec. into Manufacturing and Control Systems Env.
- ISO/IEC 15408** Common Criteria
- NIST** System Protection Profile for Industrial Control Systems (SPP-ICS)
- CIDX** Chemical Industry Data Exchange -Vulnerability Assessment Methodology (VAM) Guidance
- ISPE/GAMP4** – Good Automated Manufacturing Practices
- PCSF** Process Control System Forum ; **NERC** standards ; **AGA** standards ; **NISCC** Guidelines

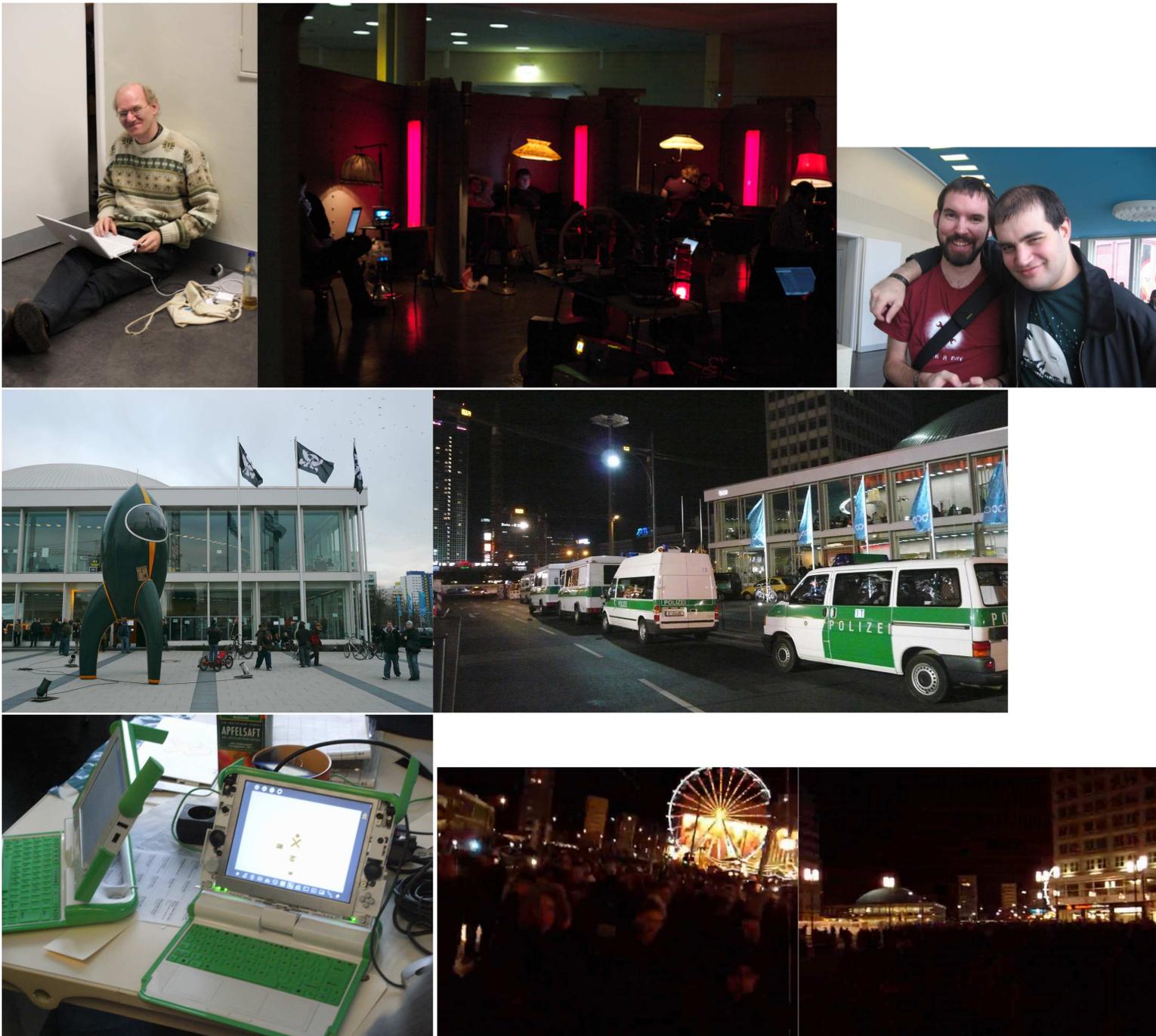
SCADA (in)Security <http://crystal.recursiva.org/> 49

The relay attack: Alice thinks she is paying \$20, but is actually charged \$2 000 for a purchase elsewhere



Alice inserts her card into Bob's fake terminal, while Carol inserts a fake card into Dave's real terminal. Using wireless communication the \$2000 purchase is debited from Alice's account

II. Sputnik tracking visualisation / "Space communism" talk / Peter Eckersley / SCADA p. 49 / Relay attacks p. 7-8



Bert Bos [1] / "Nautilus Lounge" [2] / Black flags flying [3] / Police [4] / Dan Kaminski and Eliot Phillips [5] / OLPC [6] / demonstration [7]

[1] per the photographer's description, "Bert Bos visited the Chaos Communication Congress for the 3rd time now. Yes - he is the CSS guy - look him up on wikipedia. He's a really nice guy." [2] photographer's description.

[4] Another flickr user writes "Polizei Arrived: The local constabulary were present to provide security for the Data Retention protest demonstration" ([flickr.com/photos/wiredforsound23/2148831515/in/pool-24c3/](https://www.flickr.com/photos/wiredforsound23/2148831515/in/pool-24c3/))

[5] nb. the photographer only writes "The Eliot, The Dan".

the OLPC, regularly shown at the conference [eg. 24C3, 23C3..], and the German police have identical colors. ed. note

[1-2] John-Paul Bader [flickr.com/photos/jpbader/](https://www.flickr.com/photos/jpbader/) CC BY 2.0 [3-4] BYTE RIDER [flickr.com/photos/byterider/](https://www.flickr.com/photos/byterider/) CC BY-SA 2.0  
[5] cleverclevergirl [flickr.com/photos/cleverclevergirl/](https://www.flickr.com/photos/cleverclevergirl/) CC BY 2.0 [6] Binary Koala [flickr.com/photos/binary\\_koala/](https://www.flickr.com/photos/binary_koala/) CC BY-SA 2.0  
[1,5] 28/12 [3,4] 29/12 [7] BlinkenArea [youtube.com/watch?v=wWi2miKjk-A](https://www.youtube.com/watch?v=wWi2miKjk-A) "24C3 - demo against surveillance and data retention" 29/12

## End of "Hacker" [# 20]

This essay has spontaneously evolved from a discussion on the "Hacker info" board of the CLINCH mail box [Brett] (...). In Germany, the word "Hacker" is the catch-all term for everything that the Americans (well, another case of Americanization [*Ein-Amerikanisierung*]) have spent years creating finely separated terminology for: the hacker, the phreak, the cracker and the crasher.

HACKER - the likely oldest of them - exists since computers exist, and we mean not only PCs but also the old cabinets [closets] with jet plane sound. 8 years ago, the ago met true hackers for the first time; they were, officially, employed as operators in a data center of a major company. The same made bets on who could patch the system the fastest while also implementing [clever, funny tricks]. This recalls the story of a congress organized by IBM, where, in parallel, an unofficial competition arose of the most incomprehensible APL program. The winner was most surprised, who did not recognize or remember his program (because pranksters had removed the copyright notice).

(...)

## Editorial (# 21)

Dear readers,

(...) the DATENSCHLEUDER is now in its third year of existence. (...)

For over year the CCC has been a registered association.

(...)



II. DS 21

*European hackers* : History of the Chaos  
Computer Club... – IV

Camille Akmut

April 12, 2022

(translation, commentary, edition)

## “Andy Müller-Maguhn: fighter for a free internet” [FAZ, 2000]

Only 28 years old and already 16 years of net experience: in the night to Oct. 11th, Andy Müller-Maguhn, speaker for the Chaos Computer Clubs (CCC) of Hamburg, was voted European representative to the Internet government Icann.

The journalist and operator of a ”data travel agency”, while understanding perfectly well the dealings with complicated [intricate] networks, never loses sight of the social and political aspects of the new media.

In his private and professional life, he deals with the opportunities and risks of new technologies and their social benefit

### **No ban on far-right sites**

Banning of, for instance far-right Internet sites is something that the advocate for a free Internet rigorously declines. Instead of censorship, we should put resources towards increasing the education of people with regards to the media. Because he is a member of the CCC he was looked at suspiciously abroad [outside of Germany]. The registered association still has to deal with a reputation for being a group of anarchists and half-criminals.

This comes despite the adherence of the about 1600 members to a strict ethic. According to this ethic, vulnerabilities are not to be used for commercial gain or criminal purpose, but must be published for the common good.

### **Spectacular actions**

Thanks to spectacular actions, the club, which describes itself as a ”galatic association [.....]”, earned a good reputation over the years in matters of security. It brought for example attention to hardware and software security vulnerabilities as well as in EC cards and mobile phone cards (SIM). In 1998 its founder, Wau Holland, feared that they would become the ”truffle pigs of the industry”.

Trans. note :

”free” relates to freedom, not cost – for which the German language has the separate words ”frei” and ”gratis” respectively (the former is found here).

## “The new hacker order” [FAZ, Jan. 2007 ]

The “Chaos Computer Club” has changed : over 25 years, moving from anarchistic technology freaks [*anarchischen*] to digital civil rights campaigners [*Bürgerrechtler*]. Constanze Kurz is the new face of this change : female, tech-savvy, politically committed.

She is a woman. Fact exceptional enough that she should stand out. Constance Kurz, blond, thirty-two years old sits between 4 men at a podium. The men talk about computers, the Internet, and what their association has accomplished in the last year. Topics are data retention [*Vorratsdatenspeicherung*], information freedom law [*Informationsfreiheitsgesetz*] and voting computers.

Constance Kurz actually would have as much to say as the men, but she is only a moderator this time. She provides keywords, “Please keep your contribution short”, she can be heard saying (...) In the audience there are about 300 men and only a few women. They laugh about good slogans like “The capability for humor of the police could be improved”.

Until Saturday the conference of the “Chaos Computer Club”, a class outing for the hacker scene of sorts, attended by about 3000 people every year. The motto this year, is : “Who can you trust?” The CCC was created 25 years ago, in the redaction al rooms of the “taz” at the oval panel [? *Tafel*] of Kommune 1. The early members described themselves as “galatic association” (...) For 4 days, they sit in a renovated, former DDR, conference center, eat pizza Hawaii or hamburgers, and think about the big picture : “surveillance State” and its instruments - the biometric pass and the radio chip [? *Funkchip*] in the [German, implied] I.D..

Women are pretty rare here. Barely 10 percent of the audience. (...)

When Constanze heard of the Club at the very end of the 1990s, the association made more the impression of a tinkerer gathering [*Bastel-Runde*]. At the time she was studying informatics at Humboldt University after having dropped out of an economics degree. Co-students took her to a meeting. “A bunch of nerds and geeks”, but “I liked them right away” she ways. But, for a time she only listens and does her home work for university.

“Back then they were famous for their BTX hack” she tells - a legendary action of the 1980s. The ‘Coup’ of the hackers then : in 1984 members of the CCC hacked the Sparkasse [bank] of Hamburg and wired over 135000 Deutsche Marks to their bank account. Just like that - on the touch of a button. They made the vulnerability public, gave the money back. (...)

Afterwards they made headlines regularly, so for instance in 1987 again when hackers associated with the CCC [“im Umfeld”] penetrated the American NASA computer. (...)

---

Trans., ed. note :

see the mention of “Haspa” (Ha-mburger Spa-rkasse...) in the DS. As for the NASA hack see also, there, the early articles “did you know”, common passwords etc.. [login with initials?]

“taz” should be the [left-wing] Berlin based newspaper.

## Cola, chips and algorithms [taz, 1994]

The 10th Chaos Computer Congress: From higher mathematics to recommendations on how to best tie up cops.

The Republican party is penniless and has to be dissolved, the bank accounts of Nixon have also been emptied: Responsible for this 'Coup' : Martin and Cosmo. Delighted, they sit in front of their computers, the bank accounts are cracked, per touch of a button and depending on mood, dollars are wired over from one account to another. "All Power to the People" Martin shouts and -bam- the Black Panther Party is richer by 25000 dollars. Greenpeace? Bam, they can get some money too.

Hackers as modern Robin Hoods. To take from the rich and give to the poor. Such heartwarming scenes are shown in Sneakers the Robert Redford, River Phoenix and Sidney Poitier film. But, this is in the end only the product of the dream fabric of Hollywood, for in Hamburg-Eidelstedt the world looks quite different. (...) The motto [for the conference] this year is : "In the 10th year of Orwell". (...)

On the first floor the mathematics professor from Bremen, Michael Hortmann gives a lecture on the topic "Encryption: Principles, systems and visions. Problems of social and political relevance". On the green board he writes formula such as  $ne = y$  (...) and, clearly, to only know that Bit is not just a brand of beer isn't enough any more.

At the moment a "cryptographically secure random generator" is investigated. It's about 200 long numbers that are multiplied with themselves just as much, and the professor says, radiant, that such numbers can't be [mentally] pictured. His child has already acquired the needed patience of the hacker : not even once do they complain in the 2 hours [of the expose]. (..)

His science has escaped the ivory tower recently. Encryption of data so that they can't be read by even the cleverest of unwanted eavesdroppers. The program PGP is pretty good at it and has made the NSA - the US pendant to the BND - pretty nervous who calls it "the problem of the future". Indeed, in Sneakers, Cosmo told : "The world isn't being governed by weapons anymore, but bits and bytes. It's not about more ammunition, but more information." (...)

## A room of one's own in the back-of-the-back of the basement [taz, 2005]

At the 22nd annual fair of the Chaos Computer Club technology freaks of all kinds meet. Among the nerds, few women. So that they don't disappear, they organized: Haecksen. The association offers computer-savvy women a place to go to.

(...) The Art&Beauty area in the basement is supposed to be the rest area. Just 3

women can be found here. They are part of the service staff, behind the counter. The same can be observed in the other areas, be it the rooms where the speeches are held or the Hack-center, where female participants can be counted on the fingers of one hand. "The ratio should be about 10 per cent" according to the press coordinator. Based on observation that number is far lower. (...)

Haecksen was founded in 1988 bei Rena Tangens. The media education specialist and artist said she suffered from "men who muscle in" technology spaces. (...)

## Hacking for world peace [taz, 2005]

The Chaos Computer Club aims to change the criminal image of the [hacker, implied] scene: how hackers are supposed to create an image as idealistic activists - is the topic of their 22nd annual meeting. (...)

Their self-image looks different : "We are no criminals" Tim Pritlove makes clear during the conference's opening, to resounding applause. (...)

Ref.

- Thömmes. 1994. "Cola, Chips und Algorithmen". *taz*, Jan. 3.
- "Icann : Andy Müller-Maguhn - Streiter für ein freies Internet". *FAZ*, Oct. 10 2000.
- Schmidt. Heike. 2005. "Ein Freiraum im hintersten Winkel des Kellers". *taz*, Dec. 30.
- Denk, David. 2005. "Hacken für den Weltfrieden". *taz*, Dec. 31.
- Trenkamp, Oliver. 2007. "Chaos Computer Club : Die neue Hack-Ordnung". *FAZ*, Jan. 2.

Ed.

The images of 18C3 on p. 14(17) of the first volume are from the video called "Final".

Modifications : lrtb.,

2 modified for privacy i.e. black front row. [Detail : OpenBSD?]

6 modified for visibility i.e. sharpness. [It appears to be the event's website. Detail "Haus Am Köllnischen Park (HAKP)".]

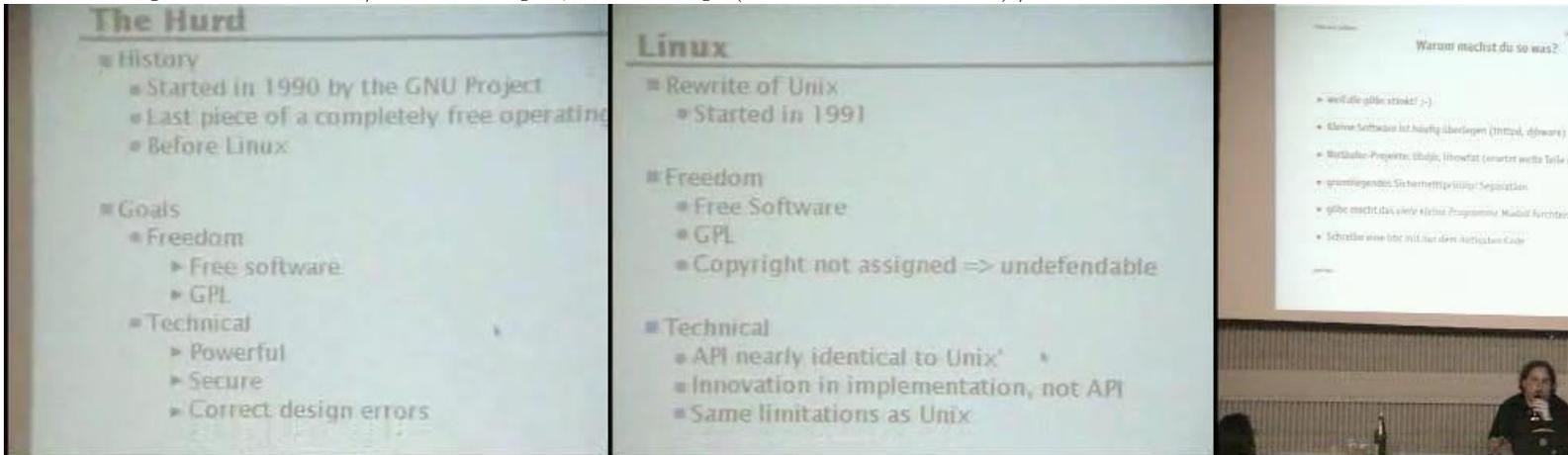
18C3 (talks, events...)

International hacker [meeting]: Laws, hacktivism...*	Emmanuel Goldstein, Andy Müller-Maguhn, Sebastian	
DNS and ICANN – a techno-political look at the Internet's ressource administration*	Andy Müller-Maguhn	"Dokumentation: <a href="http://www.icann.org/">http://www.icann.org/</a> , <a href="http://www.icannwatch.org/">http://www.icannwatch.org/</a> , <a href="http://www.icannworld.org/">http://www.icannworld.org/</a> "
Blinkenlights	Tim Pritlove	
Häcksenworkshop	Tina Lorenz	
The Hurd: Unix Redesigned	Neal Walfield	"Summary: -Introduction -Power -Security -State -Conclusion" (presentation p. 1)
The RIP Act, "Anti-Terrorism" laws, and data retention	Caspar Bowden	
End of truth : Information warfare in praxis*	Frank Rieger, Ron	
On the "truth" concept in [classical] philosophy*	Andreas Bogk	Description : "All Cretans lie." This sentence by the Cretan philosopher Epimenides is the oldest form of a paradox transmitted to us.. [translated]
A new Linux libc: diet libc or why glibc is shit*	Felix von Leitner	

\*tiles : translated, sometimes shortened]

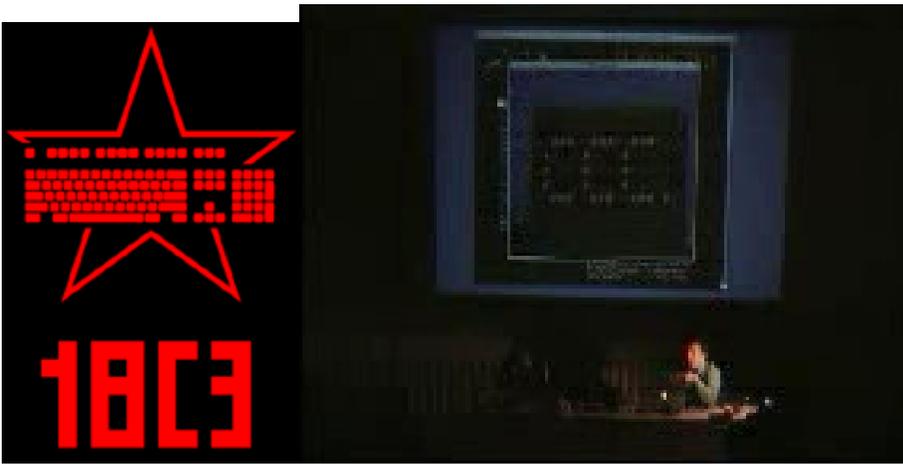


II. Müller-Maguhn and Goldstein / Frank Rosengart, Andreas Bogk ("cable tv networks" talk) / Neal Walfield



II. Hurd presentation (Detail "Before Linux") / von Leitner, dietlibc ("Why? Because glibc stinks" trans.)

18C3 remained a more national than international event (despite Goldstein, e.g.), many if not most talks in German - compared with later events. 20C3 marked a change (Jimmy Wales of Wikipedia, prominently) that would culminate in the all-stars 23C3.



### Warum machst du so was?

- weil die glibc stinkt! ;-)
- Kleine Software ist häufig überlegen (thttpd, djvware)
- Vorläufer-Projekte: libdjb, libowfat (ersetzt weite Teile der libc)
- grundlegendes Sicherheitsprinzip: Separation
- glibc macht das *viele kleine Programme* Modell fürchterlich ineffizient
- Schreibe eine libc mit nur dem nötigsten Code

Il. 18C3 logo (*18C3-logo-small.gif*) / Pritlove, Blinkenlights / von Leitner, "diet libc" presentation (dated March 2002)

## 18C3 Diary

### December 28th

I didn't feel like keeping a diary this time. The first talks of yesterday were not very convincing, as such I figured I would enjoy the convention for once, passively. I gave two presentations, both yesterday. The first at about 15 pm about DNS, which Andy convinced me to do, and which I agreed to on the condition that I would also be able to plug libc in a presentation.

What is there to report? Actually more than expected. Everything is much more relaxed this year, with the exception of the entrance, which still takes way too long, because there just is not enough space for parallel [processing]. And, so the people waited under snowy rain, in the bitter cold with their hardware. On the whole there seems to be far less people present than last year, which I find to be very positive. In the last years, it had degenerated into intensive livestock farming. In addition, this year I received a "root" badge and the (Schutz-)Engel keep away from me respectfully. That increases my mood (*winkingsmiley*)

Yesterday, the talk by Frank and Ron inspired me, it dealt with Major Consensus Narrative [verbatim], a term/expression, coined by Bruce Sterling, and which describes our society. The theory is that people have been communicating for thousands of years via stories. Hence why journalists sell stories and not facts. Facts, at most, serve as a base for stories, are a nice side-construct. (...)

I attended the Processor talk briefly, but it made the impression of not being very didactic or interesting. Then I made my way to the Smartcards speech (...) where I finally learned about the protocols, and that the industry does as much wrong there as elsewhere. Sigh.

It was communicated to me that the SmallScript talk had the major drawback of being based on a [programming] language for .NET, and thus obviously is completely ruled out. Otherwise it would be mighty nice (...)

After lunch, came my libc presentation. The room was packed something fierce. I talked them blue, so there were no questions in the end (*winkingsmiley*)

After me, Halvar was next and talked about Windows Heap Exploits. These are Buffer Overflows on the Heap, and it showed that the next following free() has two pointers (...) Halvar did great even though he was sabotaged in a nasty way by a weird figure who constantly intervened with unqualified trash.

And, now indeed today... (*winkingsmiley*)

First of all : in the Art & Beauty area, C-Base showed a new version of the 3d plotter, which can now plot ever bigger objects. Ultra cool technology, and it's fascinating to watch it work. (...)

In the morning, then came elliptic curves, and, for a change, by a mathematician, who explained this topic clearly, and didn't talk some Voodoo-Crypto-Crap. Was nice. (...)

At 12 traffic analysis (...) At 13 Ruedi and Lisa about IEEE 803.11 und WEP security. (...)

Lunch, and exchange with the Rock Linux folks, who are currently trying to figure out how to integrate diet libc (...)

Florian von Leitner. "18C3 Tagebuch."

<http://www.fefe.de/18c3.txt> [2002 June 9, Internet archive capture]

17C3



## II. Wau (Introduction)

*"Every year, new generations appear who visit [us] for the first or x-th time. Who's been here for more than 5 years? [pause] Wow, that's a fairly small number. (...) It's grown to something huge. When I think back to 1981 (...) the first meeting of the CCC in Berlin, in the rooms of the taz at the table of Kommune 1 (...) was attended by perhaps a dozen people (...) In Hamburg we, the Chaos group met weekly which helped create a sense of cohesion/solidarity. It then led to - 17 years ago - the first Congress. (...) Another development was, last year, the transition to holding a Camp every 4 years. (...) The Congress lives based on the fact that those who use it, also make it. Such that the barrier between producer and consumer is removed (...) Our ambition is not to make a conference for consumers. Not everything unfolds perfectly, for instance those who sit next to me have nothing to drink, but -uh- at least just a moment ago I was helping with making sure our Engels have enough food, who do the background work. Those are the important things. The introduction of Engels for the orga[nization] of the Congress, if one makes a calculation, following all that capitalist babble about privatization and management, if we didn't do this at the level of self-/mutual organization [Selbstorganisation] then we wouldn't be able to afford such a conference and couldn't pay for it. And, we would be compelled to go about it in a very different style. And, to have been able to avoid this for 17 years, I think, is a good achievement. It's also more fun to do it this way (...) And, I believe it belongs to the hacker spirit to be able to get it done so. At the first Congress in Hamburg we were delighted to have a school with maybe 100 seats, and to wing it financially. Back then I would have never dreamed to sit one day in a room such as this one."*

17C3 (talks, events)

GNUPG Gnu Privacy Guard - presentation of the project and status quo *	Werner Koch	
Free Software Foundation Europe presentation *	Werner Koch	
Freedom Downtime	Emmanuel Goldstein	("movie discussion")
Netfilter Framework in Linux 2.4	Harald Welte	
The programming language Dylan *	Andreas Bogk	
(Almost) Everything about DNS *	Felix von Leitner	(at least 3 other talks)

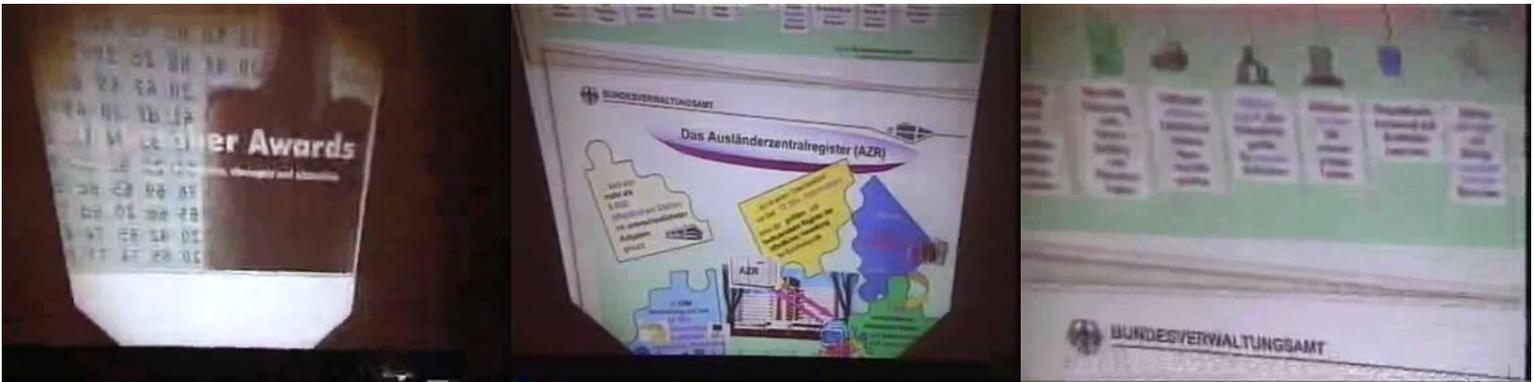


II. Andreas Bogk; Frank Rosengart ("Introduction to digital tv" talk) / Florian von Leitner ("Multicast" talk)



II. Wau Holland (intense argument during "Look back" speech) / Goldstein showing off his CCC jacket

"As hackers we have to, in such matters, think about where to focus in order to push the absurdities of these behaviours in the open, best. In the past, one was threatened with a five year sentence for just prolonging their phone cable. In terms of maximum penalty, it was treated more harshly than reckless activation of an atomic explosion [public laughs, applauds] (...) And, by proceeding that way, and making use of one's freedom of expression, and by defending one's ideas, we move forward"



II. Big Brother Awards : title followed by the Central foreigner register [prize for "lifetime work achievement"]

## CU L8ER, Wau Holland! [taz, 2001]

The founder of the Chaos Computer Club has died last Sunday (...)

He was stubborn and had a head full of ideas. Sometimes they weren't completely finished (...) Wau Holland was no follower [*Mitläufer*]. He thought about every trend with future perspectives in mind. "As always, you are one step ahead of us." reads now the black colored website of the Club. Is it allowed to honor Herwart Holland-Moritz, founder of the oldest and most prestigious hacker community [*Gemeinde*] of Germany, that way in death? (...)

One is allowed in this case. On the website [www.digitalis.org/wau](http://www.digitalis.org/wau) there are hundreds of such messages. "Get going, old buddy, you have root axes now up there." (...) Holland influenced the term "hacker" in Germany like no one else. He wasn't a follower of even his own community. He did not believe some technology could make the entire world happy. When asked he answered with long explanations about freedom of speech and societal justice [*soziale Gerechtigkeit*], rather than bitrates and processors.

(...) He also contributed to the founding of this newspaper, but with the necessary -typical of him- distance. The "Datenschleuder", which appeared in 1984 for the first time, was closer to his ideals. The hack of the Hamburg Sparkasse made him a legend over night, which he remains. He was not impressed by any of it. (...) He did not make a career. And, certainly not when the boom of the Internet promised to turn that generation of computer tinkers into millionaires. He understood too much about computers, and too much about capitalism to believe in such things.

(...)

*European hackers* : History of the Chaos  
Computer Club... – V

Camille Akmut

April 13, 2022

(translation, commentary, edition)

*Chaos Communication Camp 1999*

Hacker Variety Pack	Hugh Daniel, John Gilmore, Lucky Green, Sameer Parekh, Ian Goldberg...	(presented by Daniel as cypherpunk meeting)
Freedom - the pseudonymous IP Network - Introduction	Ian Goldberg	[3]
Linux Security Summit	Hugh Daniel	[4]
Nerdbank: Feasibility of an open source banking	Holger Blasum, Philipp Guehring, Felix von Leitner	



II. Green, Gilmore, Goldberg, Parekh, Daniel [ltr.], answering "how did you get into crypto"

- **Daniel** "We're turning tables: We're gonna give the people of Europe, or at least the hackers of Europe a chance to learn what some of the cypherpunks lives are like. Because, one of the things we noticed is that the media ... often has this attitude that there's *one* hacker, and that's the BADDEST, MEANEST, cracker dude on the block: "I can crack anything." He gets all the girls, and no one else does. Well that is true... Oh, no no."

- [on the left?] "Or, she does."

- **Daniel** "(...) We don't have the whole cypherpunk community here, but out of the 15 or 20 core cypherpunks that have made it here, we got a small sample of them up here [often looking to the left] to talk about what they do, why.."

- **Goldberg** "I'm like, the way a lot of people go about this, where they get into crypto primarily through studying mathematics, and things like that, and end up using cryptography to achieve computer security, or privacy, or whatever your goals are. (...) And, one day I ... decided I wanted to know how NFS worked. in early undergrad some time, so I went through all the RFCs and went "Oh, My God!". 'Cause it just doesn't. NFS stands for No F- Security. (...)"

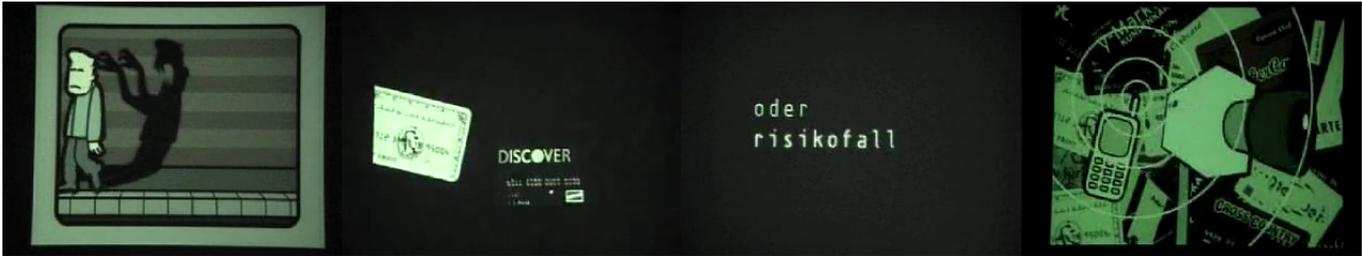
- **Gilmore** "I was in junior high school, or maybe younger, 6th grade, and encountered a Scholastics Book Services book about 'Codes and Cyphers'. And, read this thing 'cause I was reading a lot of books, I was a real avid kid reader, and discovered all this stuff about, spies and secret codes and, you know, how this had changed the course of history, at various times. How people had figured out what had been encoded on Shakepear's grave stone, 300 years later. Did Francis Bacon really write those plays? It was all strange, puzzling stuff in the world. That was my introduction to crypto. It turned out that about 15 years later I was working at Sun Microsystems, trying to figure out how to make the systems more secure, so that as we sold the UNIX machines to customers, people couldn't break into them [Goldberg points at him], but the scientists could still get in. I realized this 'codes and cyphers' cryptography stuff was actually the key - to making security work over a network. 'Cause anything else could be faked. There could be somebody in the middle, copying. Making a copy of your fingerprint, and sending it on. Making a copy of your credit card, and sending it as if they were you. (...) I quickly discovered that the government didn't want computers to be more secure."



II. Goldberg/Hugh talks



Il. 19C3 Big Brother awards animation: "the more they know about you" (the more they can lure you with)



Il. 19C3 Big Brother awards animation: "in their databases" (you are either an opportunity or a risk)

19C3 (talks, events)

Its my box: how the hardware and software traps in the Xbox were beaten and Linux installed	Michael Steil, Andy Green, Milosch Meriac	(see also Bunnie's talk in 20C3)
Freedom CPU : Year 4	Cedric Bail, Nicolas Boulay, Yann Guidon	"4th presentation to CCC and 4th year of existence"
Lawful Interception of IP Traffic: The European Context	Jaya Baloo	
Pop Culture and Media Hacking	Rudy Rucker	(Mondo)
Symbolics Lisp Machines	Andreas Bogk	[4]
Wikipedia, die freie Enzyklopädie	Kurt Jansson	(Wales shortly after)



**Architecture**

- F-CPU is designed 'from scratch' and is not compatible with existing computers
- The architecture is aimed at high efficiency for computation intensive software
- RISC features and methods
  - Fixed-size 32 bits instructions
  - 64 x 64 bits registers
  - Load-store architecture
  - No stack
  - Register #0 is hardwired to 0
  - Conditional move and jump/call/return

**Ongoing work**

(this is not complete or exhaustive)

- VHDL model
- C model
- Manual
- Boot monitor
- Gcc port
- Assembler
- Linker
- L4
- Linux

**Eine kurze Geschichte der Wikipedia**

- Stallmans GNUpedia-Idee
- Nupedia (2000?)
- Wikipedia (Januar 2001)
- deutschsprachige Wikipedia (~ Sommer 2001)

Il. Xbox hacking: "I don't play games on my Xboxes" / Rudy Rucker / Freedom CPU (pp. 5,10) / Wikipedia pres.

II. [4] the famous 'Kabelsalat', [5-6] interface ("BlinkenPaint2"), [7] motifs ("Countdown" "Counterstrike"..(?))



'Blinkenlights' video dated "2002-01-01" [hence 18C3 (?)]

## Steffen Wernery of "CCC" is free [taz, 1988]

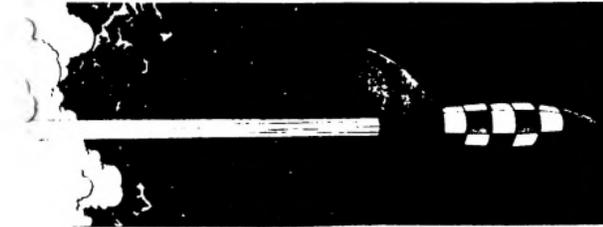
The 26 year old Steffen Wernery, journalist specializing in computer matters and member of the Board of directors of the "Chaos Computer Club" (CCC), is back in Hamburg since yesterday. After the examination hearing on Thursday afternoon, he was released from detention at cell 15 in Paris, in which he had made an unwanted home since March 16th. This was the result of a criminal complaint by the company Philipps; As he was on his way to a privacy conference held in Paris [Datenschutz] he was arrested on grounds of suspicion of data espionage. The accusation was apparently based on the hack of the NASA made previously public by CCC back in September, in which a group of anonymous hackers [unbekannt] had taken control of 135 computers of the same type as used by Philipps.

In the ancient Greek tradition of killing the bearers of bad news, both German and French investigators made the CCC and Wernery at its tip responsible for the spectacular coup. After the computer freak made credible assurances that, as a BTX specialist, he could not have handled a computer such as the ones used at Philipps, they instead accused him of incitement and complicity.

But, with his release his odds have raised, perhaps he may even avoid trial. (...)

Ref.

- Scheub, Ute. 1988. "Steffen Wernery vom "CCC" ist frei". *taz*, 21/05.
- Habluetzel, Niklaus. 2001. "CU L8ER, Wau Holland!". *taz*, 2/08.



## Current rates for hacking [# 23]

Every hobby [*Freizeitbeschäftigung*] has its price. Among very exclusive, super expensive hobbies I would include hacking. Not because of the damn expensive fees of the Post. As bothersome as they are, if it were only a matter of those, one could live with them. What me mean are the current "rates" [*Tarife*] that a hacker has to "pay", when he lets himself be caught [er].

The NASA hack, which should motivate plenty of unneeded imitators, as well as the latest raids [house searches] of the CCC - Steffen und Wau - based on alleged hacks of CERN (Switzerland) and Philips (France) are a good occasion to bring clarity to the structure of those rates. (...)

[followed by a multi-part report on latest, applicable legislation among others]

As was made clear in the first sections, there is practically no possibility of realizing a successful hack without conflicting with criminal laws. Hence, remains but one possibility : to only do those hacks for which a permission has been granted by the victim.

Thus, if one were to repeat the HASPA coup, one would need to go to HASPA prior to that and say what one's plans are, and why, and ask for permission. If one receives it, then as long as work is done within the limits of it, all risks of criminal pursuits are excluded.

Obviously, by doing so, one also limits their ability to pull off the hack - the concerned party having the time to prepare themselves for the attack. (...)

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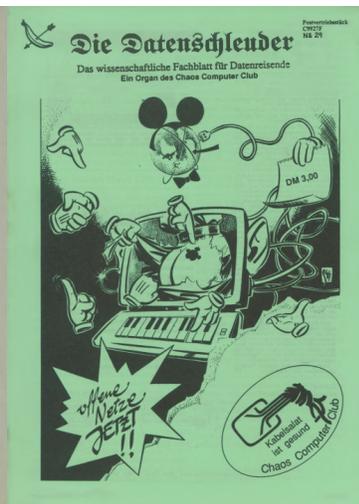
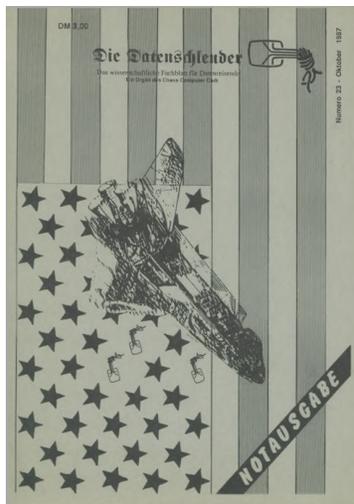
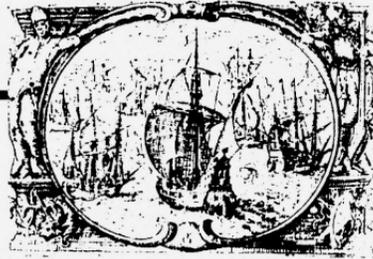
ed. note : The article essentially describes modern "white hat" "hacking", before its time.

## II. DS 23,24 covers and imagery

### What to know about Data Travellers

#### Datenreisen und Hackerethik

Anlässlich des Bit Bang im September 1987 stellt sich von neuem die Frage nach der Ethik der Hackerkultur.



### Editorial [# 24]

That the hack on NASA would bring deep, lasting changes to the hacker scene was already clear even before it was released [to the public]. The investigating authorities acted according to plans (...). Administrations are easy to predict. (...)

On the other hand, a part of the hacker scene also reacts along deprecated patterns. Put simply: following the [19]68 model, a capitalist super power, for which the State does the dirty work, is supposed to be unleashing a tight rein on the little folk and to oppress the People. Any Public prosecutor would find this laughable, and could without difficulty prove the contrary. A superficial look at the anti-trust authority is enough. The question is what would have happened if it was IBM instead, and not the CCC. And, the answer is that they wouldn't have used plastic bags to gather the secured stuff, but would have had trucks transport them away. (...)

Now do this: Replace: "hacker" with "Public prosecutor"; "Roy Ommond" with "Wau Holland, Steffen Wernery"; "Scene" with "investigating authorities". (...)



Karl Koch. *Chronology of a hacker*

1989

Karl Koch (author), friends and family (editors)  
Camille Akmut (trans.)

translation Sep. 2022

## Introduction

Like other hackers, Karl Koch lived a brief but intense life. He got to be 23 years old. Like others he was an auto-didact; learning from books, early online communities and experience. And, like some others he had problems acclimating to the academic environment (he was not able to finish high school from what we could gather from his biographical sketch, at least not in the usual allotted amount of time)<sup>1</sup>. The family issues, which Koch describes at length and appeared to carry as a constant burden throughout existence recall various other hackers' background.

One dimension that his biography makes clear is how the energy he brought to school activism and the organization of student life and the defense of young people's rights was later transferred to hacking : he sought out the contact of fellow hackers, attempted to create durable structures in his local and national context, and must have understood – as communists so well do – that with numbers and comrades come strength.

Unfortunately little is learned about his exact ideological positions from this text. And even less about how they may have evolved over time.

But, with the end of the Soviet Union so ended also Koch's life.

His favorite book however gives insights that this document, due to its context, does not : in the early, establishing pages Hagbard's introduction is so :

*" We're anarchists and outlaws, goddam it. Didn't you understand that much? We've got nothing to do with right-wing, left-wing or any other half-assed political category. If you work within the system, you come to one of the either/or choices that were implicit in the system from the beginning. You're talking like a medieval serf, asking the first agnostic whether he worships God or the Devil. We're outside the system's categories. You'll never get the hang of our game..."*

In the meager scholarship around Karl Koch's life, the character of Simon has been overlooked. In Hagbard, Koch found a super hero (a captain, muscled, tan, cool, adventurous), but in that other, over-shadowed anarchist figure [part of 'the crazies' faction], Karl should have found a brother in spirit, not as flamboyant but more like himself : Simon a defender of insanity not only, but copious practitioner thereof, never apologized for his state of being, and firmly engaged - like a long line of philosophers and writers before him (Pascal, Huxley etc.)- in the only correct, consistent, possible defense of insanity left inside of an insane world :

*" What the world calls sanity has led us to the present planetary crises, and insanity is the only viable alternative."*

The Chronology (five and a half pages long, out of a larger circa sixty pages documentation) is preceded by the following explanation :

"To give an overview we first want to print a chronology of the life of Karl ['*Lebenslauf*']. He wrote it at the beginning of [19]89 in the search for a therapy institution, addressed to therapists. We have extended this text with dates and facts."

It ends with lyrics , whose last line, translated loosely, reads "*When the night is at its darkest, the day is close*", the indication "Karl Koch (hagbard) \* 22.7.65 † 24.5.89", words of commiseration and is signed "His sister Christine and Friends".

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<sup>1</sup>Because many significant hackers have extreme academic backgrounds, no strict law or rule can be formulated.

## Karl Koch. *Chronology of a hacker, for therapists* (“I, Karl Koch...” with commentary by friends and family)

I, Karl Koch, born on 22.7.1965 in Hanover. I had difficult family circumstances [*Familienprobleme*]; the separation of my biological parents [*leiblich*] after prolonged disputes linked to alcohol and marriage conflicts, as well as repeated suicide attempts by my older sister - older by 8 years.

Editorial note : Karl’s mother, Agnes Koch, became sick with cancer. She died on 26.1.76 after a three-year struggle.

I had severe [*akute*] problems with my father, Werner Koch, who shortly before the death of my mother had moved back into the family home. His alcohol consumption increased from that point to become a problem, which he did however not acknowledge.

I had also problems with my grandmother, 81 years old, who had likewise come to live with us.

Just as much, I had problems with the - similarly inclined towards alcoholism - girlfriend of my father, who came to live with us two years after my mother’s death.

I wanted, then to move out of the home of my parents, or at least into the (converted) basement.

From the 10th grade [*10. Klasse*], I took hashish and anti-anxiety medication (Valium and Tavor) in irregular interval.<sup>12</sup>

From that point on my academic performance [*schulische Leistungen*] began to decline, and I had myself freed from attending 11th grade education. In that year of 1983 I only pursued my activities and interests as student representative [*Schuelervertreter*].

Editorial note : over many years Karl worked with lots of engagement in all areas of school life [*Schuelerarbeit*]. He worked at the city

<sup>1</sup>trans. note : Tavor is brand name Lorazepam. Koch calls them “Beruhigungstabletten” meaning calming/relaxation tablets

<sup>2</sup>t. note : the school grades are to be understood in the context of the German system i.e. that of the Gymnasium, the German high school.

school-student council [*Stadtschuelerrat*], State school-student council [*Landeschuelerrat*], the working group Arbeitskreis Schule e.V. association as well as contributing to setting up the Federal pupil representation. Karl was involved in the organization of concerts and parties and worked with the Winter theatre. He sat on the city school committee [*Stadtschulausschuss*] as well as State school advisory council [*Landesschulbeirat*] For the Friedrich Ebert Stiftung he organized seminars dedicated to student representation [*SV-Seminare*]. He fought in the anti-nuclear movement [*AKW*] and was an active anti-fascist.<sup>3</sup>



1983 marked also the death of my grandmother, who had been treated coarsely by my father and his girlfriend. I was not allowed to move out by my father.

At 18 I began the eleventh grade again, and during the following spring my father married his girlfriend, shortly before his operation due to peripheral artery disease<sup>4</sup>. Shortly thereafter we learned that my father as well had cancer, he died a half year later in August of 1984, from a lung tumor multiple brain tumors, I failed school due to the obstacles of transferring and frequent absence (I had a sleeping disorder [*Versetzungshuerde*]). From then I took hashish regularly.

<sup>3</sup>t. note : the Friedrich Ebert Stiftung is the philanthropy arm of the SPD i.e. the German centrist left party, which alternates with its center-right equivalent the CDU every few years as the governing, capitalist, party - similar to “democracy” known in the United States, and alternation - and surface altercation - between Democrats and Republicans.

<sup>4</sup>t. note : Koch refers to the condition as “Raucherbein” lit. “smoker’s leg”

The inheritance, of 100.000 DM, gave me the freedom that my father did not wish to give me, namely to conduct my own household.

But, since I was not able to get over the sudden death of my father, I perceived the money as dirty and spent as much as possible. Among others, I afforded a therapy not funded by health insurance with an independent [*'selbststaendig'*, self-employed] therapist for children and teenagers [*'jugendliche'*]. Which I however interrupted after three quarters of a year.

I had, since buying a computer with the money I had earned as a student representative in the State council [*'Landesschuelerratsmitglied'*], developed a big thirst for knowledge in computer science. The inheritance allowed me to join the computer scene for real with an Atari ST development package.

For many years now, (approximately since the age of 14) I have become infatuated with the protagonist of the trilogy "Illuminatus", by Robert A. Wilson. Coming from the USA a wave of reports on hackers reached us. It became clear to me that from now on I would be "Hagbard Celine", (as I said the very same figure from the novel), and under that pseudonym become active in the German hacking scene. In the autumn of 1984 this became a reality, with the help of the "Handbook for hackers" [*Handbuch fuer hacker*] by J. Schalla, who also happened to live in Hanover.<sup>5</sup>

Already half a year later I founded with friends, in 85, a regular get together/group [*'Stammtisch'*, lit. regulars' table], as branch of the Chaos Computer Club Hamburg, in Hanover.

Editorial note : In November 1985, Karl hacked into the VAX mainframes [*'Grossrechner'*] of the Fermi lab in Chicago. In December he made the acquaintance of other hackers, among others also Pengo, at the Chaos Communications [sic] Congress in Hamburg.

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<sup>5</sup>t. note : Juergen Schalla. The copy of the handbook that is available to us had the following address : "Friesenstrasse 24". Ch. 1 Introduction, 2 Mail boxes, 3 D<sub>A</sub>T<sub>E</sub>X-P, 4 Data communication in the phone network, 5 Misc. Note the handbook contains multiple references to the Chaos Computer Club and extracts from its journal *Datenschleuder*, while the list of mail boxes, divided into Germany and international, includes "680" entries for "USA and Canada" (where Koch may have found further inspiration or insights for his US exploits).



Editorial note : At computer conventions in Koeln and Hanover he meets other hackers from all German federal States [Bundesgebiet]. He and other hackers are approached by dubious characters at the "C" fair in Koeln, who ask if they are interested in hacking for money (breaking into police and bank computers in the Netherlands). This goes nowher [*"Die Aktion verlaeuft im Sand."*]. At parties with other hackers the idea emerges for the first time of selling information to the East [*"an den Osten"*]<sup>6</sup>

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<sup>6</sup>t. note : this being before 1989, East Germany at a minimum is meant.

By then I had contacts all over Germany [bundesweit], and the motto : "No one is a hacker who's phone bill isn't higher than 45DM and less than 1000DM". As an autodidact I quickly learned to deal with mainframe installations, which I connected to ["anzapfte"] using the phone line, and was as quickly accepted into the ranks of the hacker elite.



During that year, I began to snort cocaine, as it had been given to me for free by a programmer friend, by end of the year my consumption was regular, and still free of cost. But when, in the early parts of the year 86, I also needed to pay for this my inheritance quickly vanished. Said programmer offered me lots of money, or rather drugs in exchange for information derived from my hacking activity.

I lived in strong isolation from my environment (my circle of friends), spending entire days and nights on hacking sessions as well as drug consumption, in my apartment on Commenius street 24. Occasionally I also took Speed and LSD trips.

Since Mai 86, consuming of drugs led to increasing para-psychological perceptions (among others Jungian synchronicity).

Editorial note: in late summer 86, Pedro organized a direct contact line to the KGB - he tells Karl of it right away. The first 30.000 DM from the KGB are distributed among those in the

know ['Mitwissern', accessories] - Karl too gets his share. Since August, Clifford Stoll at the Lawrence Berkeley Laboratory is trying to catch a hacker who has been moving/trespassing/hanging out inside of his system ['herumtreibt']. In October, CERN in Switzerland is pressing charges against unknown hackers, who have been paying visits to the CERN particle accelerator for months ['Teilchenbeschleuniger']. Karl notices he is being obviously shadowed/followed. From a journalist friend he later learned that he was being observed by the Bundesnachrichtendienst and that it even possessed a key for his apartment.<sup>7</sup> Around this time Karl made multiple suicide attempts.

Towards the end of 86 multiple house searches at my friends in the entire federal territory and West Berlin led to fear psychosis. By interrupting my drug consumption and through counseling by Droys Hanover as well as intake of Aponal<sup>8</sup>, improvement of my condition soon set in.

Yet the fear remained, and shortly afterward I developed a horror of a cannibalistic conspiracy so that I relocated to Spain in February 87, unfortunately traveling through Amsterdam, where I stocked up in drugs. The former intake of cocaine, combined with depression years long repressed by hashish, led to a paranoid hallucinatory psychosis, which lasted for more than 14 days.

With a hellish fear I returned to Germany and let myself be committed voluntarily to the University hospital in Aachen by the police ['freiwillig ... einliefern'].

From there I was admitted/taken to the LKH Dueren ['einliefern'].

Editorial note : From that point until his death Karl took, without interruption, Haldol\*\* and other psychopharmaceuticals.

Then followed a short stay with friends, from there I decided to go to the State hospital in Koenigslutter ['LKH']\*

<sup>7</sup>t. note : the Hanover journalist Jochen Sperber from the German Press agency (dpa), a friend of Koch, seems a likely candidate. Possibly Maguhn of the CCC

<sup>8</sup>t. note : brand name Doxepin (an anti-depressant).

\*t. note - LKH : Landeskrankenhaus (in Lower Saxony, the German State where Koch's city of Hanover is located, still).

\*\*t. note : brand name Haloperidol; this seems like a serious step up from everything that preceded.



On being transferred to an open unit [*'offene Station'*] I ran away after meeting a Jehovah's witness. Afterwards I stayed briefly with friends in the country-side [*'dem Land'*], and once more went voluntarily to the LKH in Wunstorf, near Hanover.

Editorial note: in Berkeley Clifford Stoll had laid a trap for the hacker : he put fabricated [*'fingiert'*] SDI data<sup>9</sup> on his computer, and waited until the hacker accessed them. Through call trace by the FBI a phone number in Hanover was determined. In these files an address in Hanover was also mentioned where one supposedly could request more information about selected SDI topics. Astonishingly letters sent to that address did in fact reach a destination - the prospective [*'interessent'*] party is a Laszlo Baloughs, an alleged weapons smuggler and KGB-contact person, some bird from the USA<sup>10</sup> In April, Karl's old apartment is dissolved by his friends while he sits in the nut house [*'aufgeloest', 'Klapse'*]

There I stayed until mid May 87, to continue treatment I went for outpatient treatment in the Day clinic of Hanover until August 87.

Editorial note: On 23rd of June, Markus' \* apartment and place of work are searched by the BKA. The German VAX hackers are able that summer to gain control over more than 100 computers in NASA's network. From the summer of 87 Karl lived in a residence for the mentally ill [*'wohnheim'*] in Hanover List. [t. note : List is one of the areas/neighborhoods in Hanover.]

<sup>9</sup>t. note : Strategic Defense Initiative, Cold war policy-program under Raegan from 1983

<sup>10</sup>t. note : for the opposite perspective on this turning point moment, see ch. 41 of Stoll's book (beginning around "5:14 PM, Friday, January 16. There's the hacker.")

\* t. note : Markus Hess - possibly (appearing later in the documentation). Pengo : Hans Huebner.

In August I commenced a one year commerce school [*'hoehere Handelsschule'*] which I finished without degree in June 88.

Editorial note: On the 1st of March 88 Steffen Wernery<sup>11</sup> is arrested at the airport in Paris, as he intends to partake in a security conference. The French authorities accuse him of having participated in the hacks on the semi-conductor producers Philipps and Thompson. After 66 days he is released/free to go again, because the French had to reckon that they could prove nothing when it came to him. On the 5th of July, Karl faced the Federal Office for the protection of the Constitution [*Bundesamt für Verfassungsschutz*], after journalists recommended it. Later in July Pengo followed. Both get the assurance of no sentence against testimony.

In August 88, I began the two year training as commercial assistant-informatics [*'Wirtschaftsassistent'*] but because of academic performance issues [*'schulische'*] (due to medication and depression) I stopped already in September 88. I have been searching for a therapy place since then.

Editorial note : in Autumn 88 Karl is interrogated multiple times by the Verfassungsschutz and BKA<sup>12</sup>. Matters don't stop at hacking. Systemically, he is softened up and squeezed out [*'ausgequescht'*]. Beginning of January and Karl moves out of the residency [for the mentally ill] and moves in temporarily with a friend in Linden.

End of January 89, he looks into the therapeutical institution Ludwigsmuehle. The BKA had "taken care" [*'besorgt'*] of a place for him there. Except the therapy was not suited and did not want Karl either.<sup>13</sup>

— t. note The Illuminatus trilogy by Robert Shea and Robert Anton Wilson is full of conspiracy theories, mentions of the FBI, CIA, multiple references to cannibalism (in vol. 2 and 3, at least) etc. *The Golden Apple*, the second entry, opens with the strongly Libertarian quote :

*"Man has the right to (...) live in the way that he will (...); to play as he will; to rest as he will; to die when and how he will. (...) to dwell where he will; to move as he will on the face of the earth. Man has the right to think what he will; to speak what he will; to write what he will; to draw, paint, carve, etch, mold, build as he will"* - some of which echo, not only directly elements of Koch's itinerant life but more generally the hacker ethic of free expression and exchange of knowledge.

<sup>11</sup>t. note : co-founder of the CCC

<sup>12</sup>t. note : German federal intelligence agency and police, perhaps comparable to CIA and FBI.

<sup>13</sup>t. note: this passage could also be interpreted as "and Karl did not want it either"

At the beginning of February, Karl got a job, through an acquaintance [t. note: female, 'Bekannte'], as a driver for the State quarters of the CDU in Lower Saxony ['Landesgeschaefststelle']



On 1st of March, Peter Karl (Pedro) is arrested at the airport in Berlin on his way to Madrid. On March 2nd, one day after Pedro's arrest 14 house searches and 7 arrest occur accross Germany ['bundesweit']. Karl too is arrested, having already testified, he is let go after 2 hours and can go home. On the evening of the official unveiling of the "KGB spying ring" the editors of Panorama brought out a Brennpunkt Extra.<sup>14</sup> Talk is of the "largest spying case since Guillaume"<sup>15</sup>. The Verfassungschutz once more suggests Karl ought to sever ties with friends, and keeps him under closer surveillance. To protect himself from the press, Karl disappeared, staying with friends. Both his apartment and working place are besieged by journalists. He gets in trouble, but gets to keep his job in the end.

From 23-27/04/89 he is interrogated by the BKA in Meckenheim. It's his last testimony.

On 22/05/89 he moves into an apartment paid for by the BKA in Hanover Herrenhausen. He should separate himself from his environment ['Umfeld'].

On 23/05/89 he does not come back from a car trip ['Diensfahrt']

Midday we start looking for him. At 4PM the Verfassungschutz receives the notification of his disappearance, they start a search for him ['fanden']. Multiple homes in his environment are more or less being shadowed/observed.

On 25/05/89 a report for a missing person is placed. In the evening we disclose our information ['offenbaren wir uns'] to a lawyer [t. note : female]. We don't exclude suicide or an assassination by a Western intelligence agency.

On the evening of the 1st of June 1989 Karl's corpse, completely charred, is found in a piece of forest near Ohof in the county of Gifhorn. He had poured gasoline all over himself and set himself on fire.



<sup>14</sup>t. note : Panorama is a well known program of German television which handles a variety of political topics. ("brennpunkt", a sensation-alist title which could be translated as "crisis zone" is a program format also shown on public television). The closest equivalent we can draw, in terms of impact and longevity, is something like 60 Minutes except on PBS, Frontline could also be named.

<sup>15</sup>t. note : a reference to Willy Brandt's close personal assistant, and his wife, both spies for the DDR.

t. note In the first volume Hagbard Celine presents himself as an anarchist, while Simon (apologist of insanity), another anarchist points to a special numerical property, called "the mystic significance of the number 23" :

*"All the great anarchists died on the 23rd day of some month or other—Sacco and Vanzetti on August 23, Bonnie Parker and Clyde Barrow on May 23, Dutch on October 23—and Vince Coll was 23 years old when he was shot on 23rd Street" etc.*

Koch was 23 years old when he died, disappeared on the 23rd day of the month, of the 5th month of the year - "2 plus 3 equals 5" the character goes on, May 23rd like Bonnie & Clyde... and just like in that book that he liked so much...

## Bibliography

- *Dokumentation*. "Published by friends of Karl". 68 pages.  
(contains, in addition to the Chronology, which opens it, a documentation composed of essays e.g. 'Karl and the Press', news articles, legal documents etc.)
- Regine Rathmann, Juergen Schalla. [1985]. *Handbuch fuer Hacker*. 130 pages.
- Clifford Stoll. 1989. *The Cuckoos Egg*. Doubleday.  
(hitherto dominant, official narrative of the events, the victor's point of view or - in computer technology language - the administrator's log)
- Robert Shea and Robert Anton Wilson. [1975]. *Illuminatus!*. 3 vol..

'Karl and the Press' [on hacker Karl Koch]

Friends of Karl Koch

Camille Akmut (trans.)  
September 2022

## Karl and the Press

Karl's relationship with the press had two sides ['zwiespaeltig']. On one hand he hoped to gain a certain protection from State security authorities ['Staatschutz'] through publicity, on the other he intended to sell his story. And that at the time when he barely had his daily affairs under control. First he confided in the German Press Agency [dpa] journalist Jochen Sperber out of Hanover. The two had known each other for years. Together they planned to publish a book on the topic of hacking.

1988, likely through Sperber, a contact with NDR ['Norddeutschen Rundfunk', lit. Northern German Radio] was established. Thus Karl ended up coming into contact with the youth radio journalists Axel Lerche and Bernd Scheunemann. Both sensed after a few seconds they had stumbled onto the story of their lifetimes, as for protecting their source this was less of a concern. In their dealings with State security institutions they showed complete inexperience. In addition their technical understanding in matters of computers was very limited. Based on a document ['Fernschreiben'] from the State criminal office Munich which Karl presented to them, they scoured the entirety of relevant authorities in order to ascertain it is real/authentic. In the end, they not only receive confirmation of its authenticity, but also a visit from the Bavarian State police ['LKA'<sup>1</sup>]. The rooms of the NDR and the private rooms of Lerche and Scheunemann are searched; although without result, at the latest now the authorities have been alarmed of the situation. Of a prudent handling of an informant there can be no talk. Karls predicament and health condition are being ignored, additionally.

Nonetheless: Lerche and Scheunemann incite him to engage in hacking. This is documented ['belegt'] by the testimony of a witness. Karl lets himself be filmed in the act, and gives interviews. For the "hottest story" of their lives, they promise to give him 10.000 DM, of which he will never see anything.



'NDR journalists Lerche and Scheunemann'

Recordings of the hacking sessions and reconstituted filming ['Videoaufnahmen'] are deposited in a train station box in Hamburg. When they - supposedly - forget to pay the box' fees, the station's police open the locker and the documents land with State Security agencies ['Staatsschutz'].

Likely due to so much dilettantism, Panorama - the editors in chief of the NDR in Hamburg take over the case through Wagner, Lehnhardt [sic] and Ammann<sup>2</sup>.

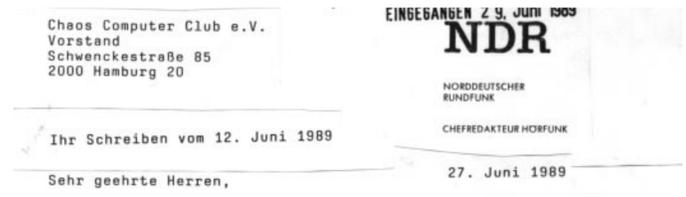


The Panorama directors pursue their own interests, namely that of a tell-all, exposure story ['Enthuellungsstory'] and promise Karl money

<sup>2</sup>t. note : these should be : Joachim Wagner (Panorama chief), 'Prof. Dr. Matthias Lehnhardt' (Panorama collaborator, whose media production visit card is included in the documentation), and Thomas Ammann (Panorama collab.).

<sup>1</sup>trans. note BKA : bundes-... meaning federal, LKA : landes-... meaning State police.

and legal help. Ultimately this turns out so : Wagner establishes contact with State Security ['Verfassungsschutz'] through his friend Christian Lochte, chief of the Hamburg branch, based on the vague premise of no punitive measures in exchange for testimony. The authorities however reserve themselves the right to start an inquiry, such that they now have him as a docile informant in their hand. Promises of help with regard to a suitable therapy place, or expressed understanding or sympathy had only for purpose to make the cooperation easier/more efficient, and to gather through him information about the [hacker] scene.



Answer of the NDR, sent to the CCC :

Sehr geehrte Herren,

We reject with the utmost firmness claims which you have raised in a letter dated 12th of June, against the NDR employees Lerche and Scheunemann.

Neither Mr. Lerche nor Mr. Scheunemann have promised Mr. Koch in Mai 1988 against information a sum of 10.000 DM. Mr. Koch merely received the usual honorary. Mr. Koch at no point was incited to commit punishable acts. We do not have even the slightest cause to doubt the account of our collaborators. Thus the connection that you create between Mr. Koch's health condition and his involvement with Mr. Lerche or Scheunemann are also false. Other workers who dealt with Mr. Koch, in the context of the ARD 'Brennpunkt' program of the 2nd of March for which they produced research, also firmly reject your accusations.

We recommend you cease making such claims in the future. Otherwise the NDR will see itself forced to start legal action against you.

Kind regards,

Gernot R

**Ref.**

— "Karl und die Presse". *Dokumentation*, "published by friends". 68 pages.

— Der Spiegel. 1989. [All great anarchists die on the 23rd.] "Alle großen Anarchisten starben am 23."

According to a deposition of Koch for the Federal Police, quoted here, hacking conducted in the apt. of one of the journalists targetted the Pentagon - Optimis database; witness, participant was Pengo.

# 'The Trial'

Friends of Karl Koch

Camille Akmut (trans.)  
October 1, 2022

## The Trial

And now, at last, we'd like to tell you a few things about the trial. Since Jan. 10th [19]90 Markus H., Peter C. and Dirk B. stand trial in Celle. Before the Higher state court<sup>1</sup> they are charged [*'angeklagt'*] with secret agent occupation. On the fifth day of the trial, 19th of Jan. 90, we were in Celle. First, a Ralf out of Hannover, a friend of Dirk, had to testify. During examination we knew quickly that judges essentially had no idea of what it was they were supposed to make a decision about. They asked, again and again, about terminology they had to learn by heart with great effort, it felt. Partly they did so without any kind of relationship whatsoever to the witnesses' testimony content. Hans was the second witness on that day who had to appear before the Higher court. Against him a separate inquiry [*'abgekoppelt'*] is ongoing based on secret agent occupation. An examination which prompted a lot of laughter.

The accused, the defense [lawyers], the journalists, and the public understood what Hans was talking about. Everyone tried explaining to the judges and the State attorney what had happened then. But there was no way to communicate to them that, a once cracked software package (a security system for VAX computers) only needs to be gotten from Singapore once, even if it is installed a hundred times. Or to make the State attorney understand that Hans did not know what was on mainframes delivered to the KGB. What was he supposed to do : put his ear against the tape? The judges also tried to establish days on which hacking had taken place by using date indications of files found on disks [Disketten]. Except that no hacker has a system where display of this information works properly. Similarly, to the dismay of the judges, the issue of which programs or computers had been used when could not be established anymore. Even with the accused's best efforts they could not remember. "Everything was so spaced out" at the time, "I don't recall which party this took place at".

A second time, on the 30th of January we were

<sup>1</sup>trans. note : 'OLG' i.e. Oberlandesgericht

present in Celle. Clifford Stoll, of the Lawrence Berkley Laboratory, had to make his statement. Clifford the little, confused, infantile (old) hippy had gotten involved in this case from the other end / side. He had, as was reported, randomly discovered hackers in his computer in 86. For over a year he had searched for them and ended up in the clutches of the FBI, CIA and NSA. Which got involved in the search. Stoll told the court, with wild gestures, his quest for the hackers. Consistently he ignored the judges in doing so and started conversating with the other parties involved. Finally, I'd have to say that I almost felt sorry for the judges. These fifty year old men from the province now have to come to the court every day at 9am to listen to things, over 5 or 6 hours, which they have no clue of, and now must settle / judge over!

### **VERDICT "in the name of the People"**

Peter Carl: 2 years on probation  
Markus Hess: 1 year and 8 months on probation  
Dirk Breschinski: 1 year and 2 months on probation

I'D RATHER BELIEVE IN THE INNOCENCE  
OF A WHORE THAN IN THE FAIRNESS OF  
GERMAN JUSTICE !!!

'Captain Hagbard Celine is dead.'

Chaos Computer Club

Camille Akmut (trans.)  
Oct 2, 2022

## Captain Hagbard Celine

is dead.

We are mourning  
the human being  
and the hacker of the first hour.

Alex (Duffy), JoJo, Ariane, Vie, Frimp, Poetronic, Maku,  
Esco, James Bond, Andy, Steffen, Wau, Holgi, Goblin, Grusl,  
Exrom, THW, Kugelfisch, Moles, KS, Maxxim, Deep, Snake,  
Typee, Asterix, padeluun, Rena, Rowue, Winni, Scarabaeus

and many others from CCC, KGB, BHP, CAC, LABOR,  
Hamburg, German and network-wide space.

We hope that the following people will be mourning his death too :  
Alan S., Wolfgang von R., Roy O., Clifford S., Axel L., Bernd S. ...

## Nothing new today! Usual is sad enough.

The Chaos Computer Club on the death of Karl Koch (24)

*A few months ago the three-part movie "Bastard" was shown on television. It was about a hacker who increasingly is involved in criminal affairs ['Machenschaften'], blackmailed ['erpressed'] and mixed up in secret agency dealings. A friend, who stayed true to him and had tried to get him out of this entanglement, became himself a suspect for investigating authorities and risked his own life in doing so ['geriet in Lebensgefahr']. At this point reality was far ahead of fiction, as the conjectures of the producers of this much talked about film proved.*

On the evening of the 1st of June 1989 the charred corpse of Karl Koch, 24 years old was found near his car in a piece of wood between Celle and Brunswick by a forestry official. As the Gifhorn police communicated, Karl had poured gasoline all over himself and put himself on fire.

Karl Koch was in an extreme situation. Two youth broadcast journalists ['Redakteure'] of the NDR, Axel L. and Bernd Sch.<sup>1</sup> were on his trail since April 1988. With the utmost hardness they researched their way through the hacker scene - motivated primarily by the potential of an exclusive story about the "super hacker" as they put it. Eventually they got to Karl Koch and were able to gain his trust. Karl got involved with the two and confessed to them in July 1988 his spying activities for the KGB. Koch gave them confidential material in order to back up the truth content of his claims. The journalists at this point recommended that he look for a lawyer urgently and that he should cooperate with the investigating authorities. In August 1988 Koch revealed himself to the Federal police ['offenbarte', 'Bundeskriminalamt'].

At first Axel L. and Bernd Sch. kept the confidential material given to them under lock. Bernd Sch., in September 1988 deposited the documents in a train station locker, but failed to pay the fee by throwing additional coins in. As anyone who has watched bad criminal series will be able to tell, lockers which are not

paid for are investigated by the railway police ['Bahnpolizei'] after 48 hours. It is an elegant way to hand over information to investigating authorities without coming forward as an informant oneself.

In the following months Koch was increasingly isolated from his environment and rooted out. Eventually he also refused to speak with representatives of the CCC. Journalists, who had worked with CCC for years in open cooperation, wrapped themselves in silence, secrecy [mystery mongering? 'Geheimniskraemerei'], insinuations and serious accusations became daily occurrence ['verhalten'].

Meanwhile friends of Koch endeavored to secure his future existence. He obtained a job as an office assistant with the CDU in Lower Saxony. Everyone involved was bound to confidentiality ['geheimins-verpflichtet'].

It was the Spiegel which mentioned the name of Koch first in relationship with drug addiction and KGB activities in computer networks. From then on any chance of a new beginning for Koch was over.

To the Hamburg Abendblatt the journalists Bernd Sch. and Axel L. boasted of having uncovered the story. The Chaos Computer Club and a few responsible journalists endeavored during the past months to handle the case seriously and to protect Koch (from becoming a marketing object?). Where nothing else helped, the research work of colleagues was sabotaged [Stein bewusst im Weg legen...] and one was accused of defamation ['Rufbeschaedigung'] or of "tarnishing the nest". Photos of the affected person ['Betroffenem'] were particularly sought after. Wherever it was possible, publications by those competent to understand the sensitive nature ['Brisanz'] of the topic was prevented.

"Now reality has found its way back to him" the Spiegel wrote when it published Koch's name and reported on his imaginary world. But, really 'real' and felt was the contradiction in which Koch now had to live [following this] split between public and private person. After the interrogations, in which he was compelled to both tell everything and then keep everything secret, the realities of the media world crushed down on him.

Now reality has lost him, and we are saddened.

Chaos Computer Club June 4th 1989

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<sup>1</sup>t. note : Lerche, Scheunemann. The CCC shortened their names due to likely legal threats.



Civilization beyond the big pond: an overview of  
French computer science (prosopography)

Camille Akmut

March 10, 2022

Draft

## Pre-history

**Pascal** 17th c.

Computer

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Selected works : *Pensees*

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**Arnauld & Nicole/Port Royal** 17th c.

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Selected works : *Logique*

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**Cavailles, Jean** early 20th c.

Philosophy of mathematics (logic)

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Selected works : *Sur la logique et la theorie de la science*, “L’Ecole de Vienne au Congres de Prague”, *Briefwechsel Cantor-Dedekind* with Emmy Noether

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Secondary lit. : *Vie et mort de Jean Cavailles* (G. Canguilhem)

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## Networking

**Pouzin, Louis** b. 1931

Datagrams. CYCLADES

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Selected works : “Presentation and major design aspects of the CYCLADES computer network” (1973)

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Selected awards : first Internet Hall of Fame, 2012 Pioneer; second IEEE Internet Award, 2001

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Secondary lit. : e.g. - *Inventing the Internet - How the Web was Born*

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*“A computer network is being developed in France, under government sponsorship, to link about twenty heterogeneous computers located in universities, research and D.P. Centers.” Pouzin 1973 abstract*

*“Cerf go[es] on to recall that ‘some of Pouzin’s datagram ideas and sliding window ideas ended up in TCP’. ‘Datagrams’ extended the notion of the packet.” Gillies/Cailliau 2000 p. 41*

*“For his pioneering development and effective advocacy of datagram networking, the technology that enabled the rapid, inexpensive, decentralized expansion of the Internet.” IEEE Internet Award*

**Zimmerman, Hubert** b. 1941

CYCLADES

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Secondary lit. : e.g. - *Inventing the Internet - How the Web was Born*

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*“Cyclades was based on a very simple packet switching system. ... Pouzin and Zimmerman argued that keeping network operations simple made it easier to build an internet.” Abbate 1999 p. 125*

*“The PTT’s animosity to Pouzin and his datagrams was later to prove fatal ... Whilst the French government was subsidizing the new Transpace network, which used X.25, Cyclades was being allowed to languish. Nevertheless, Cyclades’ legacy to the networking world was ensured. Hubert Zimmermann from Pouzin’s group went on to become president of the CCITT network architecture working group” Gillies/Cailliau 2000 p. 43*

**Lelann, Gerard** b. 1943  
CYCLADES. ARPANET

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Secondary lit. : e.g. - *Inventing the Internet - How the Web was Born*

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*“In June 1973, Cerf, Kahn and Metcalfe started to work on the design of a host-to-host protocol for internetworking. They called it Transfer Control Protocol (TCP), and they were helped by a fourth person: Gerard Le Lann, who had worked with Louis Pouzin on Cyclades (...) Le Lann’s experience with Cyclades proved decisive. ‘Gerard came to Stanford for a sabbatical during the period of critical design of the TCP protocol’ says Cerf” Gillies/Cailliau 2000 p. 40*

*“Another member of the Cyclades team, Gerard Lelann, worked in Cerf’s lab at Stanford, where he was able to participate directly in the design of ARPA’s internet system.” Abbate 1999 p. 125*

## Logic, Programming Languages

**Nivat, Maurice** b. 1937  
I Formal language theory II Semantics

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Secondary lit. : “Une breve biographie scientifique de Maurice Nivat” (P.-L. Curien)

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*“Maurice created a research project ... During this period, research at IRIA was very lively, and benefited from a fruitful interaction with young researchers like Gilles Kahn, Jean Vuillemin, and Gerard Huet who had learned advanced programming practice in the USA.” Curien 2002 p. 4*

**Sifakis, Joseph** b. 1946  
Model checking

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Selected award : Turing Award 2007, CNRS Silver medal

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**Ichbiah, Jean** b. 1940  
Ada

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Selected works : “Ada: Past, Present, Future” (ACM Comm.)

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**Colmerauer, Alain** b. 1943  
Prolog. (Constraint) Logic Programming

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Selected works : “The Birth of Prolog” (HOPL II)

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*“The programming language, Prolog, was born of a project aimed not at producing a programming language but at processing natural languages; in this case, French. The project gave rise to a preliminary version of Prolog at the end of 1971” Colmerauer 1993 p. 331*

*“Logic or constraint-based languages take their inspiration from predicate logic ... Prolog is the best-known logic language.”* Scott 2016 p. 12

**Girard, Jean-Yves** b. 1947

System F. Linear logic.

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Selected works :                   - *Interpretation fonctionnelle et elimination des coupures de l'arithmetique d'ordre superieur* (1972)  
   - “Linear logic” (1987)  
   - *Proofs and Types* (1989)

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Selected awards :                   CNRS Silver medal

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Secondary literature :            TAPL, in part. ch. 23 and AdvTAPL

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*“Thus, Girard’s linear logic (1987) gives rise to the idea of linear type systems (Wadler, 1990, Wadler, 1991, Turner, Wadler, and Mossin, 1995, Hodas, 1992, Mackie, 1994, Chirimar, Gunter, and Riecke, 1996, Kobayashi, Pierce, and Turner, 1996, and many others) ...”*

Pierce 2002 p. 109

**Cousot, Radhia** b. 1947

Abstract interpretation

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Selected works :                   “Abstract Interpretation” (fourth POPL)

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**Cousot, Patrick** b. 1948

Abstract interpretation

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Selected works :                   “Abstract Interpretation” (fourth POPL)

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Selected awards :                   CNRS Silver medal

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**Huet, Gerard** b. 1947

Calculus of Constructions. Caml. Coq

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Selected works :                   “The Calculus of Constructions” (1988)

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Selected awards :                   ACM Software System Award 2013

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Secondary literature :            TAPL, AdvTAPL

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**Meyer, Bertrand** b. 1950

Eiffel

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Selected awards :                   ACM Software System Award 2006

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**Coquand, Thierry** b. 1961

Calculus of Constructions. Coq

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Selected works :                   “The Calculus of Constructions” (1988)

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Selected awards :                   ACM Software System Award 2013

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Secondary literature :            TAPL, AdvTAPL

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*“The Calculus of Constructions (CC), one of the most famous systems of dependent types, was introduced by Coquand and Huet (1988) as a setting for all of constructive mathematics. While it has turned out that CC*

*needs to be extended with certain features (in particular inductive types [Mohring, 1986]), its simplicity in relationship to its expressivity is unprecedented.*" Pierce 2004 p. 64

**Paulin-Mohring, Christine** b. 1962

Coq

Selected awards : ACM Software System Award 2013

Secondary literature : TAPL, AdvTAPL

**Leroy, Xavier** b. 1967

OCaml

Selected awards : College de France

**Berry, Gerard** b. 1948

Esterel

Selected works : "The ESTEREL synchronous programming language" (1992)

Selected awards : College de France, CNRS Gold medal

## Algorithms

**Vuillemin, Jean** b. [circa 1948]

Binomial heaps

Selected works : "A data structure for manipulating priority queues" (Comm. ACM)

Secondary lit. : CLRS (2ed, removed in 3rd)

"Binomial heaps were introduced in 1978 by Vuillemin" Cormen et al. 2001 p. 475

**Flajolet, Philippe** b. 1948

Analytic combinatorics

Selected works : *Analytic Combinatorics* (2009 with R. Sedgewick)

Selected awards : CNRS Silver Medal

**Chazelle, Bernard** b. 1955

Selected works : "A minimum spanning tree algorithm with inverse-Ackermann type complexity" (2000)

Secondary lit. : CLRS

*"Unlike previous minimum-spanning-tree algorithms, Chazelle's algorithm does not follow the greedy method."* Cormen et al. 2009 p. 397

## Computer graphics

**Bezier, Pierre** b. 1910

Bezier curves and surfaces

Secondary literature : any computer graphics textbook e.g. Hughes et al. (ch. 22, 23)

## Computer music

**Risset, Jean-Claude** b. 1938

Selected works : *Computer Suite From Little Boy* (1968)

Selected awards : CNRS Gold medal

## Artificial intelligence, Machine learning

**LeCun, Yann** b. 1960

Deep neural networks

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Selected works : "Backpropagation applied to handwritten zip code recognition" (1989)

Selected awards : Turing Award 2018, College de France

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## Cryptography

**Stern, Jacques** b. 1949

"founding father"

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Selected awards : CNRS Gold medal

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## Free software

**Bellard, Fabrice**

Selected works : FFmpeg. QEMU

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**Card, Remy**

Selected works : Extended file system (ext)

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**Dachary, Loic**

Selected works : GNU Savannah

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**Lawall, Julia**

Selected works : Linux kernel

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## Video games

**Chahi, Eric**

Selected works : *Another World* (1991)

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**Cuisset, Paul**

Selected works : *Flashback* (1992)

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**Raynal, Frederick**

Selected works : *Alone in the Dark* (1992)

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“in 1974 Gaullism gave way to Giscardism [and] the politics of laissez-faire with disastrous consequences for Cyclades. It became the political fashion to treat computing as an industry like any other with the government’s role limited ...” p. 38
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“Caml was first designed and implemented by INRIA’s Formel team, headed by Gerard Huet.”
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- [AdvTAPL] 2004. *Advanced Topics in Types And Programming Languages*. MIT Press.
- Scott, Michael. 2016. *Programming Language Pragmatics*. 4th ed.. Morgan Kaufmann.
- IEEE Internet Award. [iee.org/content/dam/ieee-org/ieee/web/org/about/awards/recipients/internet\\_rl.pdf](http://iee.org/content/dam/ieee-org/ieee/web/org/about/awards/recipients/internet_rl.pdf)
- ACM Software System Award. [awards.acm.org/software-system/award-winners](http://awards.acm.org/software-system/award-winners)
- ACM Turing Award. [amturing.acm.org/award\\_winners/sifakis\\_1701095.cfm](http://amturing.acm.org/award_winners/sifakis_1701095.cfm)
- Girard, Jean-Yves. [girard.perso.math.cnrs.fr/titres.pdf](http://girard.perso.math.cnrs.fr/titres.pdf) (CV)
- CNRS. [archives.cnrs.fr/presse/article/947](http://archives.cnrs.fr/presse/article/947)