03-1980 [O-8701] Intelligent Games - **Intelligent Chess (prototype)**
It was with great interest that I watched the video of ChessBase from Hamburg (Germany). After 40 years, Frederic Friedel shows a small electronic device. It turns out to be a very rare prototype! The English company Intelligent Games, headed by David Levy and Kevin O'Connell, developed in the autumn of 1979 an innovative chess computer. With this machine it was possible to play chess and store chess games with the help of an external cassette recorder. On one standard cassette tape it was possible to archive up to 1000 chess games. Not only a cassette recorder, but also a television set could be connected. It was an entirely new way of viewing and analysing chess games, move by move visually on the screen.

ChessBase is considered the inventor of the chess database. In principle this is also true. But there is still a background story in which Frederic Friedel plays a role. In the ChessBase (German) video we talk about one of the very first chess database hardware systems, called "Intelligent Chess". And we have rummaged around in our little ChessBase museum to present you the original prototype including its database cassette.

Intelligent Chess (prototype)
The world's first electronic chess database!
https://www.youtube.com/watch?v=1CvcCJNu_sg&feature=emb_logo

By the spring of 1980 this prototype had been developed far enough, and the concept was finally transferred to the Hongkong manufacturer SciSys. A version of the Intelligent Chess prototype was gifted to Fr. Friedel by his friend David Levy. Frederic came up with the idea of storing no less than 750 Bobby Fischer games on cassette tape. He had this monotonous manual typing done by a 15-year-old student, who was able to earn an extra penny with it. This was actually the beginning of the first electronic chess database in the world!

Nach 2 Minuten und 30 Sekunden, sagt Frederic Friedel: "Ich habe immer noch ein Exemplar (Prototyp) davon". Dies bedeutet, dass von diesem Prototyp mehrere Kopien angefertigt wurden. Normalerweise werden nicht mehr als 5 Prototypen gebaut, aber ich habe das Gefühl, dass für diesen Prototyp nicht mehr als 3 Exemplare gebaut worden sind. Es versteht sich auch von selbst, dass der Entwurf und die Vervielfältigung eines Prototyps teuer und zeitaufwändig ist.

After 2 minutes and 30 seconds, Frederic Friedel says: "I still have a copy (prototype) of it". This implies that several copies of this prototype have been made. Normally no more than 5 prototypes are built, but I have the feeling that no more than 3 copies have been built for this prototype. It also goes without saying that designing and duplicating a prototype is expensive and time consuming.

## 11 Februar 1979: Schach dem Elektronenhirn – David Levy vs Chess 4.8

Schaukampf Mensch contra Machine. David Levy gegen den leistungsfähigsten Computer der Welt, den CDC Cyber 176 und sein eigens zu diesem Zweck verbessertes Schachprogramm Chess 4.8. Mit einem Vortrag von Volker Arzt & Frederic Friedel. Mit Beiträgen von u.a. Dr. David Cahlander & Prof. Dr. Frieder Schwenkel. (ZDF - Dauer: ca. 43 Minuten).

http://www.schaakcomputers.nl/hein_veldhuis/database/files/02-1979,%20Der%20Spiegel,%20Wettkampf%20Levy%20gegen%20Chess%204.8%20in%20Hamburg.pdf

Show fight man versus machine. David Levy against the most powerful computer in the world, the CDC Cyber 176 and its specially improved chess program Chess 4.8. With a lecture by Volker Arzt & Frederic Friedel. With contributions from, among others, Dr. David Cahlander & Prof. Dr. Frieder Schwenkel. (ZDF - duration: approx. 43 minutes).
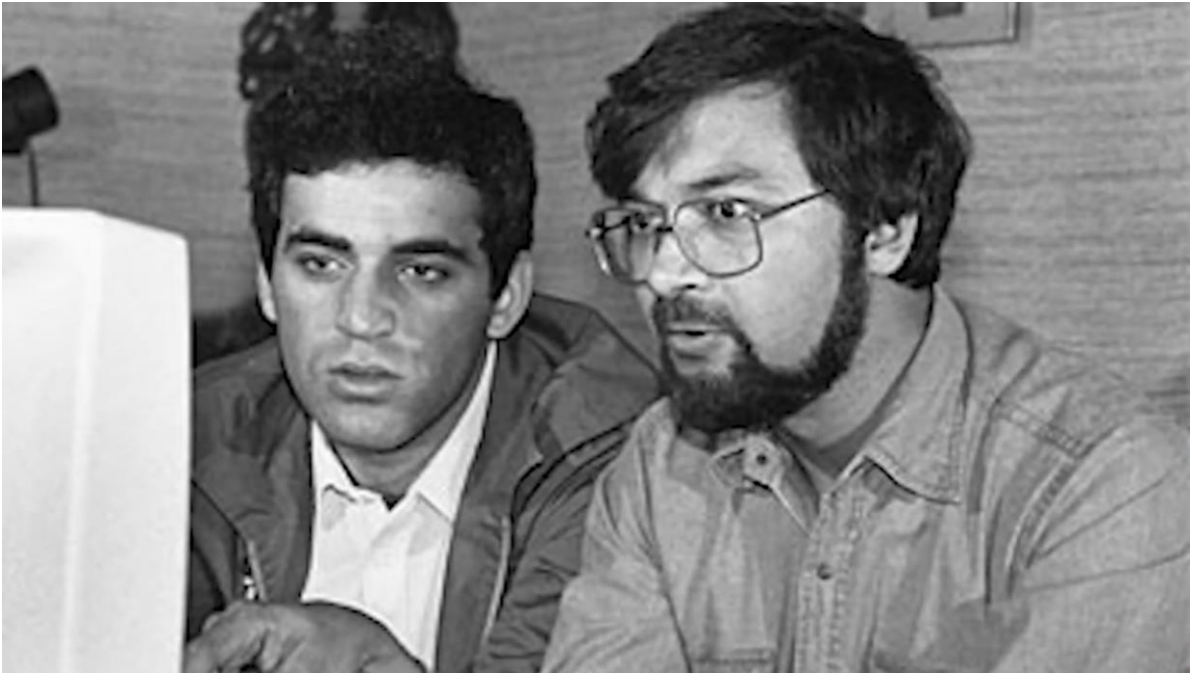
Schach-Datenbank (1985)

Auch für sehr gute Schachspieler werden nach Garrys Auffassung Computer bald unentbehrlich sein. Er will sich bald eine Datenbank mit Eröffnungen, Partien, Stellungen und ganz allgemeinen Schachinformationen einrichten, auf einem Personal Computer. Wir haben lange über Datenstrukturen und Speichermedien gesprochen, wobei ich feststellen konnte, daß es sich nicht um die Phantastereien eines computerbegeisterten Laien handelt, sondern um ein mit den heutigen Geräten praktisch zu verwirklichendes Unterfangen. Vielleicht wird bald ein PC-Hersteller ein solches Projekt unterstützen, das ja Millionen von Schachfreunden in aller Welt zugute käme. Besonders wenn es von einem Schachweltmeister initiiert würde. (Quelle: CSS 4/85)


Matthias Wüllenweber im Gespräch mit Garry Kasparow

Nicht weniger als 750 Bobby Fischer Schachpartien wurden manuell auf einer Kassette gespeichert. Dies war eigentlich der Beginn der ersten Schachdatenbank der Welt!

No less than 750 Bobby Fischer chess games were stored manually (move by move) on a cassette tape. This was actually the beginning of the first chess database in the world!
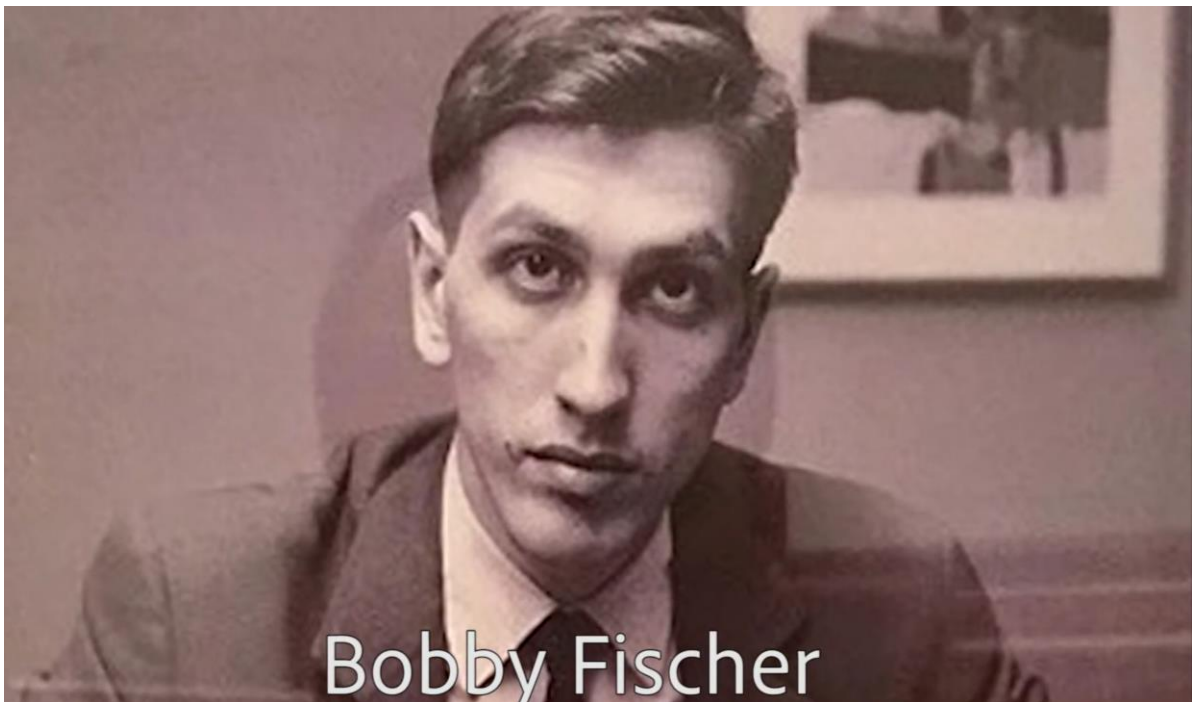
Kevin O'Connell
on the Intelligent Chess prototype

It was designed by David Levy and me, partly based on Barry Savage's Tolinka machine (of the late 1970s), and incorporated the then latest version of the Philidor playing programme. It was both a chess computer and an early forerunner of both the chess database and chess display systems. One of the claims of the Tolinka machine was that it was used by Viktor Korchnoi in his preparation for the world championship match against Anatoly Karpov in Baguio City 1978. (Kevin O'Connell in march 2006)

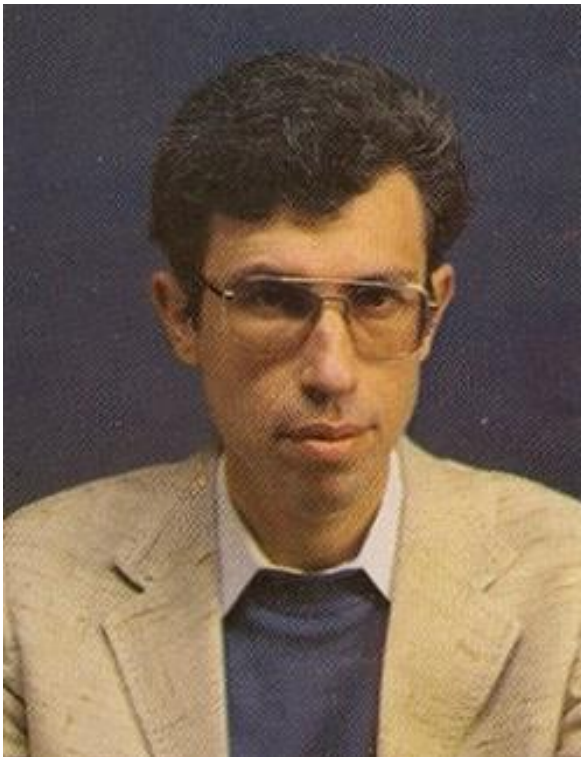Helmut Pfleger | Photo: Hartmut Metz

Ein Stereokassettenband hat 2 Spuren. Auf der einen Spur könnte man Schach spielen, und auf der anderen Spur könnte man die besprochenen Kommentare anhören. Dr. Helmut Pfleger kommentierte dann etwa 12 Partien. Das untere Bild zeigt das kommerzielle Modell, SciSys Intelligent Chess mit dem eingebauten Kassettenrecorder.

A stereo cassette tape has 2 tracks. On one track you could play chess, and on the other track you could listen to the discussed comments. Dr. Helmut Pfleger then commented on about 12 games. The lower image shows the commercial model, SciSys Intelligent Chess with the built-in cassette recorder.
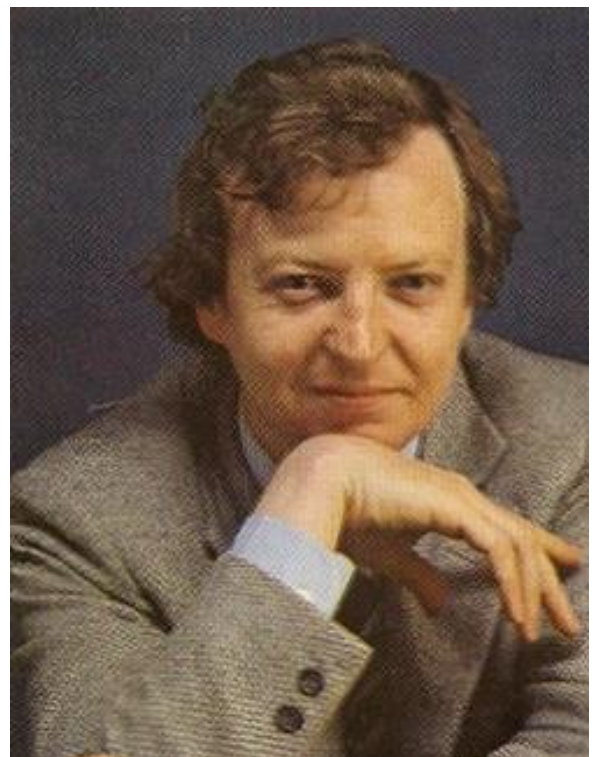
Intelligent Chess
Partienspeicherung auf Musikkassetten

Hersteller: Intelligent Games
Markteinführung: 1980
Autor: David Levy

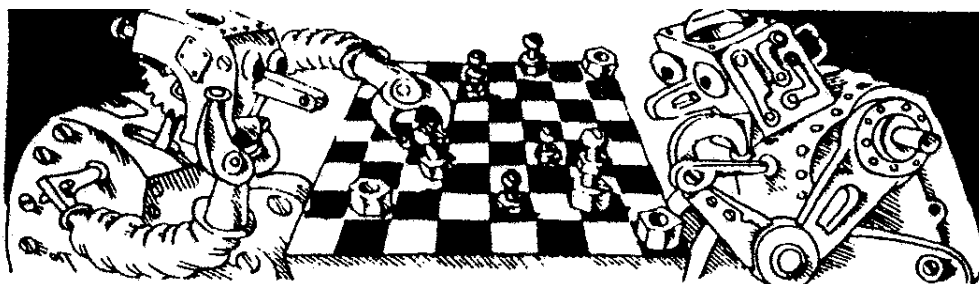## Designed by two of the world's leading chess and computer experts

David Levy

Kevin O'Connell

Tim Harding (1981)
Barry Savage's Tolinka
Forerunner of Intelligent Chess (prototype)

This was the original chess player's visual recorder, designed by Barry Savage and used by Viktor Korchnoi in preparation for his world championship match with Karpov in 1978. The basic idea of Tolinka was developed and simplified and wedded to a chess-playing program to produce Intelligent Chess.

Tolinka only operates in black-and-white and its graphics are cruder than those of Intelligent Chess. It can hold a game of a maximum of 63 moves each from White and Black, compared with 120 for Intelligent Chess; longer games have to be recorded and stored in two chunks, which takes a good grasp of how to operate the machine. Tolinka does not operate well with some colour sets. Its keyboard is less pleasant to operate and indexing recorded games may not be so easy.

On the other hand, Tolinka has some advantages. It does not have the 'Flash' feature, but it does have 'GO TO' which means that instead of laboriously stepping through all the moves of a game in memory one by one, it is possible to go almost instantaneously back and forth through the memory just by pressing 'GO TO' followed by the move number. Tolinka is also cheaper than Intelligent Chess by a good deal; the difference can be spent, if desired, on a machine which plays chess better than Intelligent Chess does.

Tolinka itself does not play chess – it only records, retrieves and displays games using a modified cassette tape recorder (included in price) and a television (not included).

Tolinka has more potential than has perhaps been realized. It is possible, if you have a video-cassette recorder, to use that instead of the ordinary tape recorder and make full television lectures of a game. Eugene O'Hare, former president of the Irish Chess Union, has done this and it has the advantage that the chess teacher can do all his preparatory work with Tolinka at home in peace, and then just take the VCR to the lecture. I am told that this can also be done with Intelligent Chess, but I have not investigated that possibility myself.

Source: Tim Harding
The Chess Computer Book (Pergamon Press, 1981)

NB: The machine is called "Tolinka", which is a diminutive of Anatoly – meaning Anatoly Karpov. It was named by Viktor Korchnoi at the World Championship in Baguio City in 1978.

The long awaited original video footage of Tolinka!

In one of the broadcasts of the cult classic BBC sci-fi series, Blake's 7 from the 70's, a device called »Blake's 7 speed chess machine« was shown. Insiders knew better; it was the chess machine called Tolinka. In 2007 an unknown person put the video footage of Blake's 7 speed chess machine on YouTube. It was there for quite a long time, until the BBC studios claimed the rights and YouTube had to block the video.
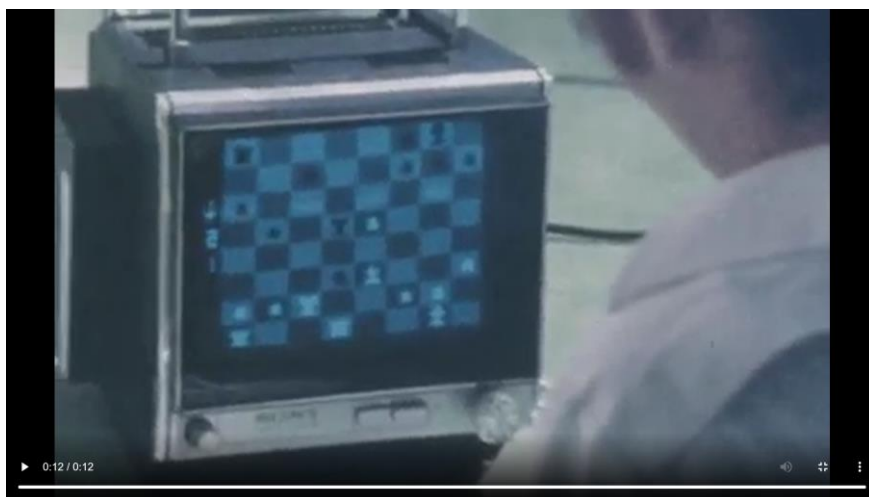
To my dismay, today (11 October 2020) I came across a completely different short video. You can see it here in an article by Computable from Belgium:
https://www.computable.be/artikel/opmerkelijk/development/6522908/5933061/oproep-wie-herkent-de-schaakmachine.html

And only the video here (to download):
https://video.twimg.com/tweet_video/DrugP15UUAALLcE.mp4

In the headline of the article was in large letters, Call: Who recognizes the 'chess machine'? I saw it in the blink of an eye; this was Tolinka! The short video fragments are authentic. Proof is now there that Viktor Korchnoi really used Tolinka to prepare for the 1978 World Chess Championship in Baguio City in the Philippines. There he would take on Anatoly Karpov. Probably it was mainly a preparation to recognise and train the opening repertoire? Viktor Korchnoi called the chess machine somewhat derogatory Tolinka, which is a diminutive of Anatoly - meaning Anatoly Karpov.

# Tolinka: The original video images with Viktor Korchnoi…

It seems as if Viktor Korchnoi is sitting in a small hotel room (in Baguio City in 1978?) with an attendant who operates Tolinka. The room is not very comfortable, because Tolinka is connected to the peripherals on the floor with a tangle of cables. Clearly recognisable is Tolinka (the operator presses a key) which is connected to a cassette recorder and a television set. Between the cassette recorder (bottom left) and Tolinka you can still see a large high device. What would that be?

# Tolinka: The original video images with Viktor Korchnoi…
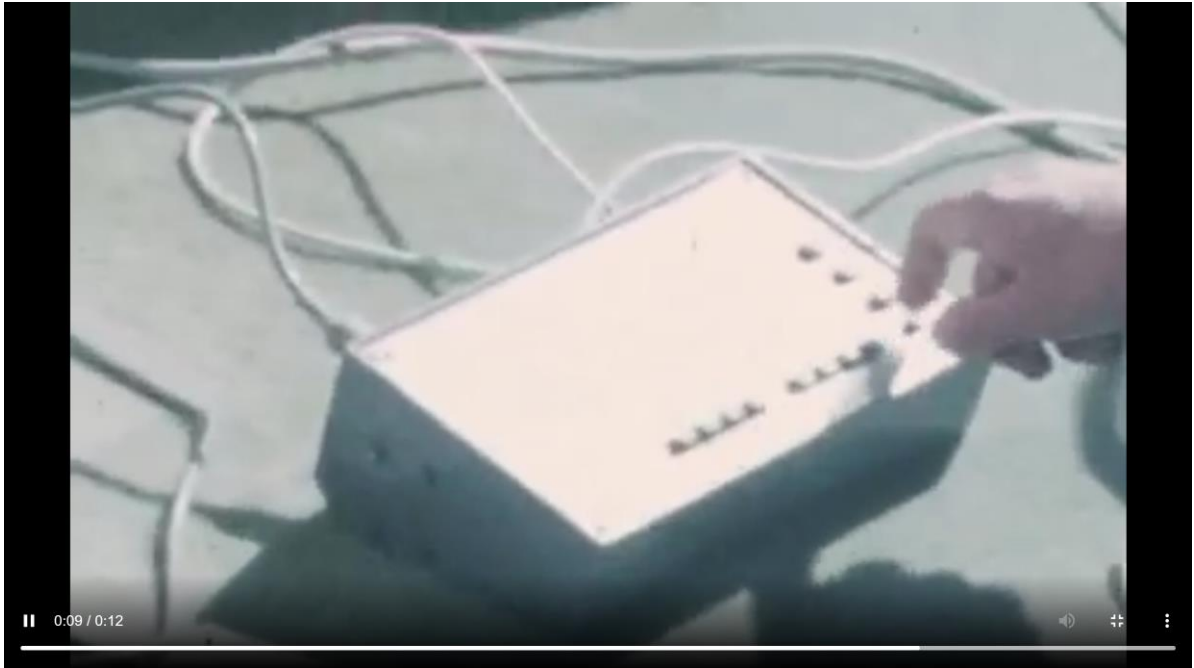
The top picture shows Tolinka with a row of 8 control buttons at the bottom of the housing and on the right in a somewhat larger version another 4 control buttons. So a total of 12 buttons to operate Tolinka, which is spartan compared to the Intelligent Chess prototype which has 8 more buttons to operate the machine. Why does the Intelligent Chess prototype have 8 more buttons to operate it? And then on the bottom image, the compact portable television set. Is the screen black and white or already in colour? Old times come back to life when I was in my twenties in 1978...

That leaves me with a few curious questions. Who was Tolinka's operator, and who knows where this prototype has gone? Who filmed the video, and when did these images first appear? If you have more information, please feel free to send me an e-mail.

In conclusion. So it has been proven that even after 40 years a prototype can pop up just like that. That reminds me of the Applied Concepts Boris Grandmaster (prototype) from 1979. When will the world ever see this insanely beautiful design?

Applied Concepts
Boris Grandmaster (prototype)
The World's First Fully Electronic Chess Computer

(photo copyright © by http://www.schaakcomputers.nl/)
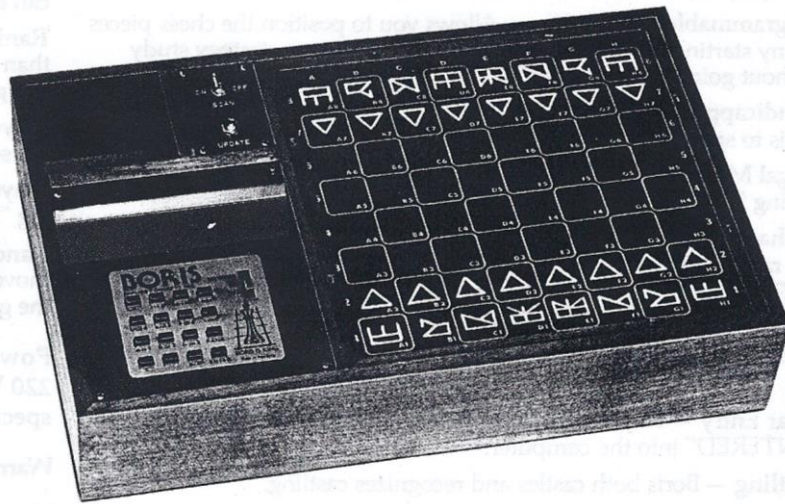
Hans-Peter Ketterling (1980)

Die vornehmste Ausführung ist jedoch Boris Grandmaster, ein Modell, das für den normalen Schachfreund allerdings kaum noch erschwinglich gewesen wäre, wenn es je auf dem Markt erschienen wäre. Die Prototypen haben ein vergrößertes Gehäuse, das auch ein elektronisches Schachbrett enthält, auf dessen Feldern direkt die Figurensymbole in der bei Boris üblichen Weise dargestellt werden, allerdings wesentlich größer als sonst. »Faszinierend ist es, auf dem kompletten Brett Boris Grandmaster beim Rechnen zu beobachten und die Figurensymbole über das Brett huschen zu sehen«

Verwandte Weblinks / Related Weblinks:

https://www.youtube.com/watch?v=1CvcCJNu_sg&feature=emb_logo
ChessBase-Video – Intelligent Chess Prototyp auf YouTube

https://de.chessbase.com/post/die-anfaenge-der-schachdatenbanken-mit-frederic-friedel
Die Anfänge der Schachdatenbanken mit Frederic Friedel

https://www.chessprogramming.org/Intelligent_Chess
SciSys Intelligent Chess, the commercial version

https://www.old-computers.com/museum/computer.asp?st=1&c=1277
The Menta, designed by Barry Savage

http://www.schaakcomputers.nl/hein_veldhuis/database/files/09-1979%20[A-1641]%20Applied%20Concepts%20-%20Boris%20Grandmaster%20(prototype).pdf
Applied Concepts Boris Grandmaster prototype

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