



COLUMNISTS

ChessOK Cafe

Dadi Jonsson



CHESS THEATRE

Play through and download the games from [ChessCafe.com](#) in the [DGT Game Viewer](#).

The Complete DGT Product Line

[ChessCafe.com](#) is pleased to invite readers to a game of chess at Convekta's ChessOK Playing Zone!



Click here for the [Flash](#) version or here to download and install the [Full](#) version. Or play online against [Rybka](#).

Interactive Deep Analysis with Rybka Aquarium

We have heard from the developers of both Rybka 3 ([May 2008](#)) and Rybka Aquarium, the new Rybka user interface ([April 2008](#)). Now let's take a sneak peak at Aquarium's capabilities. The feature we examine this month will be of great benefit to the serious chess player.

Interactive Deep Analysis

Aquarium is in a class of its own when it comes to advanced analysis. It offers comprehensive game analysis and of course infinite analysis – both offer features not found in other chess software – and then there is Interactive Deep Analysis (IDeA). As Rybka Aquarium will not be released until later this summer and some of the implementation details may change, I will concentrate only on some of the major features of IDeA instead of giving a detailed step by step description.

The purpose of IDeA is to dig deeply into a position and return as much information about it as possible. IDeA keeps its analysis in a tree structure that is unlimited in size and which the user can browse at will, even while the analysis is in progress.

Besides having a live view of the evolving analysis, the user can also direct the analysis into the most interesting positions by excluding or adding positions and variations to the analysis queue. In short, IDeA is a highly selective search controlled by Aquarium (and the user). Interesting lines are analyzed deeply, but weak moves are only considered briefly or not at all.

Interactive Deep Analysis is a very powerful tool in the hands of the serious chess player. Let's see what IDeA looks like in action:

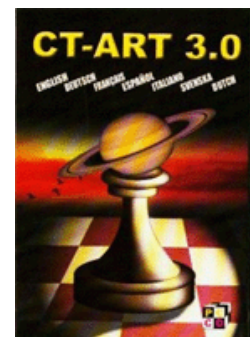


Interactive Deep Analysis in progress

When IDeA is running it displays four windows:

- The familiar board window, showing the current position.
- The tree window. No, this is not the opening book window! Instead, the tree window allows you to monitor the progress of the analysis and browse the variations.
- The status window shows basic information and statistics about the analysis, such as the name of the engine, how many positions have

Check out these bestselling titles from [USCFSales.com](#):



CT-ART 3.0



Chess Assistant 9



Chess Strategy 2.0

- been analyzed and how long it has been running.
- The notation window allows you to examine the position and the analysis results while it is running.

Yet the above description only tells half the story. IDeA will produce very valuable analysis when running on “auto-pilot,” for instance in overnight analysis, and I expect that this simple use of IDeA will be preferred by many users. But if you are a serious chess player, you may have your own views about which moves and variations are important and should be emphasized. In that case you’ll appreciate the interactive aspect of IDeA, which is described later in this article.

Stopping and Resuming an Analysis Session

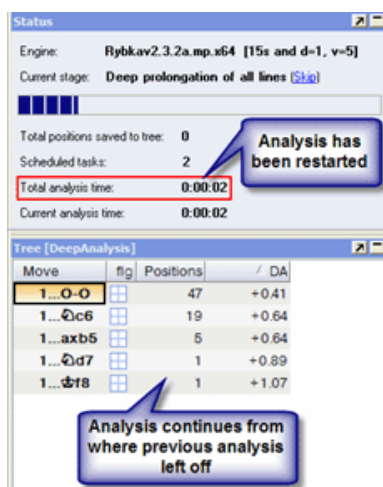
IDeA stores all its analysis on disk. When the analysis begins Aquarium checks if the position has been analyzed before. If it has, then the existing analysis is loaded into the IDeA tree and the analysis continues where the previous analysis left off. This means that you can stop the analysis at any time, exit Aquarium and continue at a later time. The same applies even if your computer crashes (as long as the hard disk is OK) or the power goes off. The reason is that the analysis is written to disk regularly throughout the analysis process.

Note that you don’t have to restart your analysis from the same position to take advantage of this feature. As long as the position exists in the analysis tree, this feature kicks in. This is great for those who work on a piece of analysis over a long period of time and gradually want to expand and deepen it.

Here is an example of how this works. It is from the famous Nolot test suite, which is a collection of eleven positions that were once considered to be unsolvable by chess engines. It is still one of the toughest test suites available. One of the hardest problems is position number six, from the game Melaniuk-Ivanchuk, USSR 1988. It is the position shown in the image above. Here is what I did:

- I started IDeA from the Nolot 6 position and then exited Aquarium after about twenty minutes, while it still considered 1...O-O to be the best move. The correct move, 1...axb5, was at that time evaluated as worse.
- I started Aquarium again and resumed the analysis.

The image below shows how the old analysis was loaded into the tree window once the analysis was restarted. About nine minutes later 1...axb5 took the top spot, but it only became the clear favorite, with an evaluation approaching equality, after about fifty minutes. I should mention that for this experiment I only gave IDeA 15 seconds/position, as you can see in the status window at the top of the image. This is quite a bit shorter than I would normally recommend for analysis.



Control the Focus of Analysis

The tree window does more than just show the moves that have been evaluated in the root position. This is an interactive tree that you can browse while analysis is running to examine all variations and positions. Additionally you can use the tree to control which positions are analyzed.

Tree [DeepAnalysis]			
Move	flg	Positions	DA
1...axb5		20	+0.37
1...O-O		114	+0.41
1...Nc6		48	+0.85
1...Bd7		18	+0.93
1...Nd7		19	+1.07
1...Kf8		1	+1.27

Analyzed moves in the tree with evaluations

The above image shows the tree window while IDeA is running. The “Move” column shows the moves that have been evaluated. The number of positions following each move that have been analyzed is displayed in the “Positions” column. Finally the “DA” column indicates the move evaluation. When you click on a move in the tree window it is highlighted, as 1...axb5 is in the image above. You can browse the tree using the arrow keys or the mouse.

If you run into a position where you want to concentrate the analysis on a particular move or moves, then you can mark them so that no other moves will be considered. If I think that 1...axb5 is the only interesting move in the current position and I don’t want IDeA to waste time analyzing other moves, I color the move green, as shown in the following image. Note that you mark the moves while IDeA is running.

Tree [DeepAnalysis]			
Move	flg	Positions	DA
1...axb5		20	+0.37
1...O-O		114	+0.41
1...Nc6		48	+0.85
1...Bd7		18	+0.93
1...Nd7		19	+1.07
1...Kf8		1	+1.27

Only 1...axb5 will be analyzed

In some cases I may not be sure about the best move, but I know that I want to eliminate certain moves from further analysis to make better use of the analysis time. These moves would then be colored red in the tree. The image below shows an example where I have excluded 1...O-O from further analysis. All other moves will continue to be analyzed and new moves may be added to the analysis in this position.

Tree [DeepAnalysis]			
Move	flg	Positions	DA
1...axb5		20	+0.37
1...O-O		114	+0.41
1...Nc6		48	+0.85
1...Bd7		18	+0.93
1...Nd7		19	+1.07
1...Kf8		1	+1.27

1...O-O will not be analyzed further

I can color as many positions in the tree as I like and thereby focus the analysis on the positions that I think are most important.

Requesting Analysis of Additional Positions

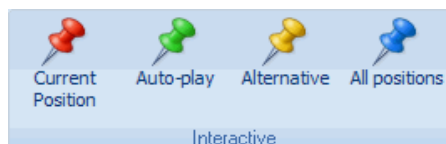
The move coloring method only allows you to mark moves that are already in the tree. If you want to request analysis of positions that are not there, you can add your own moves to the tree. When you browse the tree in the tree window the moves are automatically added to the notation window. If you run into a position that you find interesting, you can start experimenting with it by making the moves on the board; those moves are also added to the notation window. After a while it may look like this:



*Requesting analysis
of additional positions*

Here I have added several variations of my own analysis. When I request analysis of a specific position it is marked with a light-blue background color. If you look at the notation window you can see that I have requested analysis of four different positions; these will be handled by the IDeA as high priority tasks.

There are several options to request analysis of a position or request deeper analysis of positions that are already in the tree. The next image shows the four buttons used to create analysis tasks and send them to IDeA.



Different types of analysis tasks

Current position: When you click this button, the position on the board is scheduled for analysis. It is analyzed in the same way as if IDeA had selected the position automatically.

Auto-play: The chess engine plays a number of moves starting from the current position and stores them in the tree with their evaluation. The user decides how many moves should be played.

Alternative: This option searches for a new alternative in the current position.

All positions: You are not limited to adding a single position to the analysis. You can add as many moves and variations to the notation window as you wish and then send them all at once to the analysis queue by clicking "All Positions."

Adding the IDeA Results to the Notation

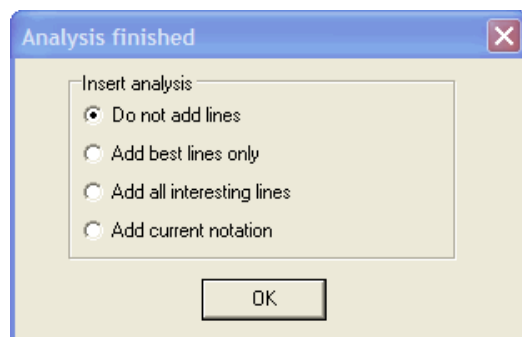
One advantage of IDeA is that you can leave it running as



long as you like. It just keeps expanding its analysis and adding new information to the tree until you decide to stop. If you leave it running overnight, you can check the status in the morning and then decide if you want to continue, perhaps after using the methods described above to make sure that the analysis will focus on the variations that are of interest. When you want to stop the analysis, click on the “Stop” button.



When you stop IDeA all the analysis that was added to the tree will still be available, but you are also given the opportunity to add the lines that were analyzed to the game notation. You are given the four options shown in the “Analysis finished” dialog box.



Do you want to add the analysis to the notation?

You can keep all the analysis in the tree and not add any of it to the game notation (“Do not add lines”). Note that you can always add the lines to the notation at a later time. Simply restart IDeA from the same position and when you stop it you can add the lines to the notation. If you select “Add best lines only” you will only see a few variations added to the notation and just the best moves that were found along with the evaluation of each variation. Transpositions are also noted. “Add all interesting lines” can add many variations to the notation, as shown in the screenshot below. Finally, “Add current notation” copies all the moves that you entered in the notation window while IDeA was running.



All interesting lines were added to the notation

Interactive Deep Analysis is just one example of the fresh approach used in the design of Rybka Aquarium. Other interesting features will be described in the coming months.

Many of the Chess Assistant programs described by Dadi in this column are available in the [USCFSales Online Catalog](#).

Do you have a question about a Chess Assistant product? Send it along

and perhaps it will be answered in an upcoming column. Please include your name and country of residence.

[Yes, I have a question for Dadi!](#)



[TOP OF PAGE](#)



[HOME](#)



[COLUMNS](#)



[LINKS](#)



[ARCHIVES](#)



[ABOUT THE
CHESS CAFE](#)

[\[ChessCafe Home Page\]](#) [\[Book Review\]](#) [\[Columnists\]](#)

[\[Endgame Study\]](#) [\[The Skittles Room\]](#) [\[Archives\]](#)

[\[Links\]](#) [\[Online Bookstore\]](#) [\[About ChessCafe.com\]](#) [\[Contact Us\]](#)

© 2008 CyberCafes, LLC. All Rights Reserved.

"**ChessCafe.com**®" is a registered trademark of Russell Enterprises, Inc.