

BAGHDAD

Bridge hand generator for Windows

First why is the name Baghdad. I had to come up with some name and a catchy acronym always appeals – so I came up with **Bid And Generate Hands Display Analyse Deals** – not brilliant but at my age not bad!

For some time I have had a simple hand generator which I used to display random hands for bidding practice. When I was running the training session for the Street Club, I realised how useful it would be to be able to generate/display/print specific types of hands for the students. Hence, I upgraded my existing program to add just a few extra facilities.

With the program all unregistered users can

- a) Display a random deal and bid each hand
- b) Examine each hand and consider the suggested bid(s) for that hand as an opener, responder or over-caller.
- c) Display hands of a particular type, e.g. weak no trump, or a Stayman response to a 1NT opener from a database of 600 deals
- d) Display complete deals of composite hand types e.g. an opening 1 of a suit with a take out double, from a database of 600 deals.
- e) Enter a particular hand of your choice and ask for suggested bids.
- f) Examine distribution statistics for the supplied (600) deals.
- g) Print hands or complete deals
- h) Display bidding/play notes where I have provided them.
- i) Display pre-dealt hands (not generated) I have used as training examples

With the program all registered users can

- a) Do all tasks as unregistered user's abilities above
- b) Download a larger (latest) database of 5000 deals.
- c) Download the latest version of the program without having to uninstall the existing version.
- d) Turn standard conventions on/off.

In addition, authorised administrative users can

- a) Modify the rules the rules used to identify hand types
- b) Define your own bidding system rules (not for the faint hearted!)
- c) Request additional hands to be generated/analysed
- d) Build their own pre-dealt hands with notes for bidding and play
- e) Backup/Restore the database used.

So a little more detail about how the program works. Firstly, it does not generate hands to meet particular criteria – rather it generates random hands, then ascertains the features for that hand, and only presents hands of those criteria.

Of course, if you want to know how to bid a hand containing 13 spades it is most unlikely that the program will generate that particular hand for you!

Some players have a distrust of computer dealt hands- somehow believing that they are in some sense atypical – and in way they are justified in that premise. Manually shuffled deals are less likely to contain voids than computer dealt hands (the reason is because manual shuffled decks tend to rely on a series of ‘cuts’ – this is particularly so at rubber).

Baghdad shuffles reasonably randomly! The technique used is as follows: imagine the deck of cards as from the manufacturer – they are in sequence 2-A of each suit. The computer program places each of the 52 cards in one of 52 boxes. It then goes through each box, swapping the card in that box at random with another card in one of the 52 boxes. After doing these 52 swaps we have a random deal or set of 52 cards. The first 13 boxes make up the first hand, the next 13 into the next hand and so on. To ensure performance and consistency when hands are generated the ‘randomness’ is based on the deal number. Hence the deal number ‘n’ will always be the same set of cards.

How many random deals does Baghdad generate? You can have as many as you like! Typically, a few thousand is adequate for most purposes – but I have run the system with a million hands – it just takes time to generate the hands and analyse them. It can analyse about 100 deals (400 hands) per minute, though displaying a deal is not affected by the number of deals available.

So how is the analysis of hands performed? Hands can be analysed according to certain rules. The rules (which may be amended by the authorised users known as administrators), use attributes of a hand.

The attributes of the hand (used to satisfy a rule) are:

- a) Number of HCP (Milton Work Honour Card Points 0-37): hands are evaluated as being within a range of points.
- b) Shape (e.g. 4432, 6421 – 37 distinct shapes): hands are evaluated as being one of seven shapes.
- c) Number of losers (Losing Trick Count 0-12): hands are evaluated within a range.
- d) Number of Quick Tricks: hands are evaluated within a range.
- e) Number of Playing Tricks: hands are evaluated within a range.
- f) Number of cards in each suit: hands are evaluated within a range.

- g) ‘Type’ of hand: Single suited, two suited, three suited in each suit – up to four options per rule.
- h) Possession of up to four particular cards (rarely used)
- i) The satisfying of up to four prerequisite rules.
- j) The exclusion of up to four prerequisite rules.
- k) The number of HCP in each suit
- l) Whether a particular convention is in use or not (e.g. Jacoby transfers)

The number of hands that satisfy a particular rule is maintained in a database. In addition, a hand rule can be designated as ‘Selectable’, which means that the rule may be used as a selection criteria when displaying hands. This does require an entry in the system database for each hand – and this can be significant.

So why would you not have a rule as selectable? Consider the types of hands that are eligible for a Stayman response to an opening weak no trump. Well there are many discrete types – weak hands with 5 card spade suits, weak hands with long clubs, weak hands with a 5440 shape void in clubs, intermediate 11-12 point hands with a 4 card major, hands with two 5 card majors, strong hands with 4 card majors etc. – at least 7 types. You can have a rule for each of these types and they might be selectable – however to group all the hands in to a single “Valid for Stayman” you would need two ‘grouping’ rules “Valid for Stayman Part 1” and Valid for Stayman Part 2”. (A grouping rule would just specify up to four prerequisite rules). You would then have a final grouping rule “Valid for Stayman” quoting the two other grouping rules as prerequisites. The two intermediate grouping rules need not be selectable.

Non-selectable grouping rules are particularly important when dealing with an “Opening one of a suit” rule which is incredibly complicated, but by and large, you need not worry about rule creation unless you really want to! Only “Selectable” rules are suggested as possible bids for a hand.

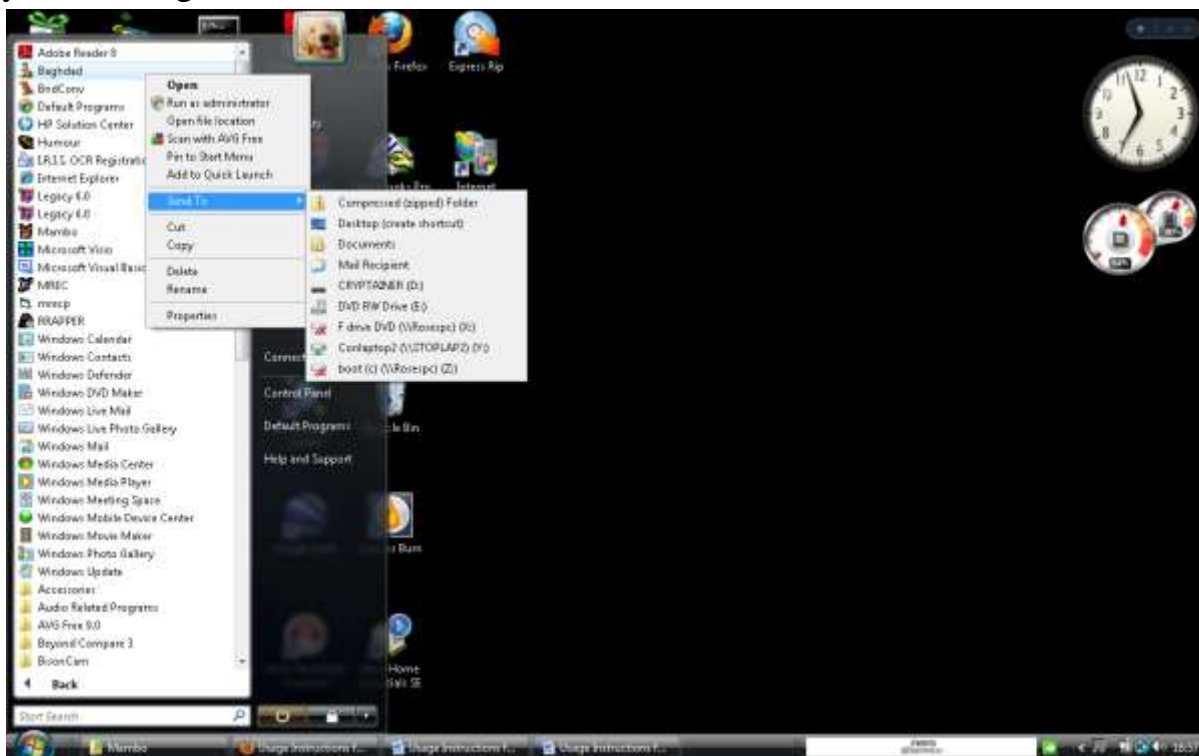
There is a special type of rule called a convention rule. This can be set to True or False and implies that the particular convention is used or not. Thus if you specify the Jacoby Transfer convention is False, then transfer bids will not be suggested as sound in response to 1NT.

By default, all convention rules are set to True. Thus does mean for example that a hand that qualifies as say a weak 2♠ take out of 1NT will also qualify as a Jacoby Transfer 2♥. One particular duplicate bid suggested will apply to opening 1 of a suit – Standard (steam age?) Acol and Standard English Modern Acol (SEMA) have slight differences – so a hand will frequently be described as being valid as a 1♦ (ACOL) and a 1♦ (SEMA) opening.

One final type of rule is a “Deal rule” – this specifies the combination of hand rules that are needed – for example opener to have a weak no trump, and partner to have a Stayman response; or opener to have an opening 1 of a suit bid, and Left Hand Opponent (LHO) have a takeout double . With deal rules (which are always selectable), up to six combinations of hand rules for opener, LHO, partner and RHO are possible.

Enough generalities, a real look at the system is more clarifying. See the “Installation Manual” for how to get the system installed. To start Baghdad you can use several methods. If you left click the Windows Start button, (bottom left of normal Windows screen) – click All Programs, then you should be presented with a list of installed programs – and Baghdad will probably be very close to the top – another advantage of the name! You can then left click this to start Baghdad.

You might wish to create a Desktop Shortcut to Baghdad – to do so just follow then instruction in previous paragraph but at the final stage right click rather than left click and you should get a screen as below.



Left click the Desktop (create shortcut) and a short cut will now exist on your desk top – it will have an icon of a small animal,



which if you double click will start Baghdad, and you will see the following.



This screen will pop up whenever you start Baghdad until you register the software with me. To register the software just send me an email quoting the user id as displayed (9106 in the example above) – send it to roy.rowe@ukonline.co.uk. I will reply with a 4-digit access code, which you should enter in the above screen and click ‘Set Access Code’. But you do not have to register – you can use the software freely (with or without an access code) – just click the exit button above and you will get the main Baghdad screen



This shows the first hand – which of course is deal 1. North is dealer and you can see the North hand. The numbers under the cards in the hand are the number of HCP, shape, number of losers, number of Quick tricks and Playing tricks. Clearly the North hand shown is not worthy of an opening bid – so click on the Pass entry in the (bidding) list on the bottom right of the screen. This selects the bid and the display changes to



Note the pass by North has been recorded in the central frame, and now it is East's turn to bid. He has a standard weak no trump opener. So select the 1NT from the bidding list. The screen moves on to



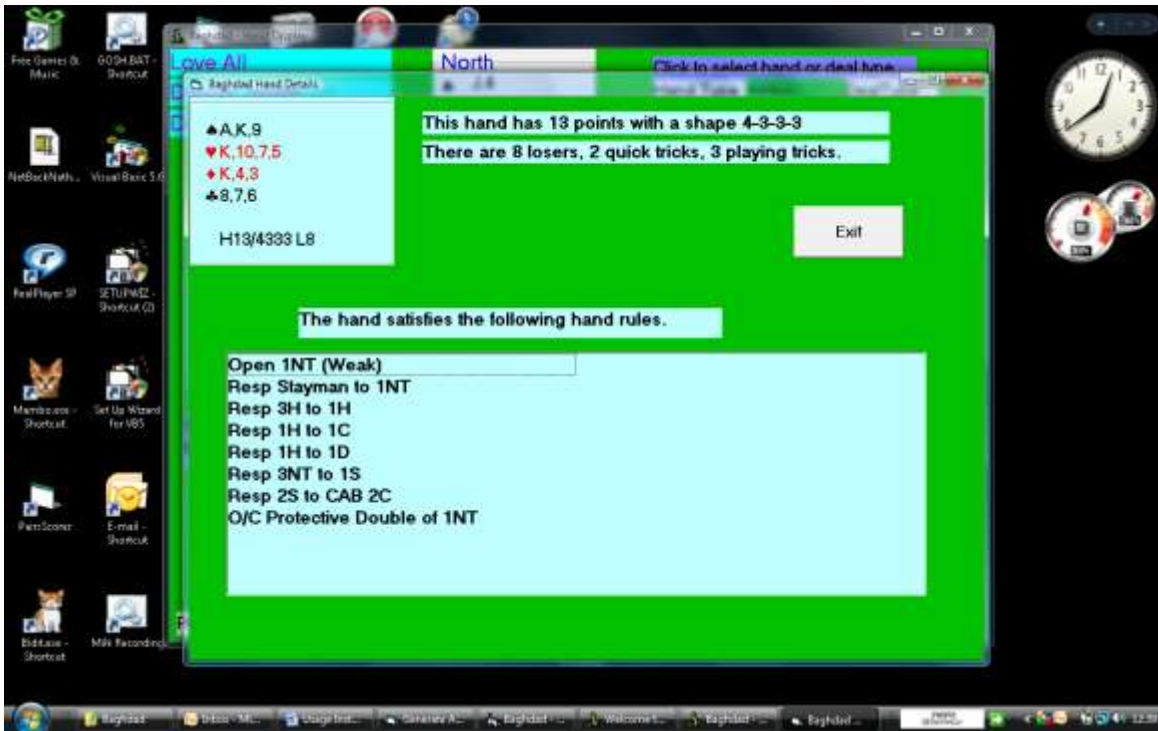
You should notice the bid has been recorded in the centre frame and now the South hand is displayed. For the moment, let us assume that South passes (click the Pass) and then we will see West's hand.



West has a weak takeout into 2♦, so select that bid, and we will see North's hand again. Select the Pass option for North, East and South and we will now have had three consecutive passes and the auction is over, and all four hands will be displayed.



Thus, you have displayed your first complete deal. Before moving on did you agree with the opening bid? Point the mouse at the East hand and click anywhere within the frame. You get the following



This is what the computer thinks the hand is worth – as expected, it is worth an opening bid of 1NT. Of course, opposite different other hands it is worthy of other bids. In the protective position, it is just about worth a double of an opening 1NT. It certainly is worth investigating a Heart fit via Stayman opposite an opening 1NT; if partner opens 1♥ you certainly would respond 3♥; if partner opens 1 of minor you would respond 1♥; finally if partner opens 1♠ then 3NT defines the hand well, and if playing CAB then it is worth 2♠ in response to 2♣ opener. Now if only my partner could bid as well! Click Exit to return to displaying all four hands. You might like to reconsider South's pass of the opening 1NT. Surely, it is good enough to bid 2♣? Click on the hand and you get



As you can see, Baghdad (or rather my set of rules) considers it is worth 2♣ over 1NT. Click exit to show all four hands again. Before you leave this hand, if you look at the screen display showing all four hands, you will notice to the right the black text “There is a summary”, click on this text and you will see



The screen shows my notes on the hand/deal – you may agree or otherwise – just my view of the hand. Only a few deals have any comments however – as I get time, I will update my database to add more comments etc.

Return to the hand display (by clicking anywhere in the text), and from that screen select the Next option – the second of the options “First” “Next” “Prev” “Last” “Random” on the top right of the hand display screen. Surprise, surprise we have moved on to hand 2. But notice that this time the dealer is East.



What do you think of the East hand – worthy of a bid – no, so select Pass and carry on as before. Of course instead of waiting until all bids have been made before seeing all four hands you can just click on “Show All” option.

The rest of options in the cluster on the top right are obvious (well they are to me). “Prev” will display the previous deal, “Last” will display the last deal analysed (number 600 in our case), and “First” – well I guess you can work that out.

Select “Random” for a random deal from the ones available; if you want to look at a particular deal, just enter the deal number in the box to the right of “Actual” and click “Actual”.

But suppose you want to practice your 1NT opening bids – well for that you need to select particular hand type. So click the white label “Hand Type” option at top right of screen. (Just to the right of the North hand). You will get a display as overleaf:-



This is a list of the types of bids I have so far analysed/allocated – this screen will change as more conventions/bids are learnt by Baghdad (yes I do have to teach it!), but click the Open 1NT (Weak) option from the list (numbered 152). The following display appears



Notice this is deal 1 again – but the 1NT opener (which was East previously) has moved to the North hand – because North is dealer on hand 1.

Notice the print button in the bottom left of the display. If selected, then the current deal will be printed with all four hands with the bidding to your current default printer.

Note four deals are printed on a page – the actual print will only take place when you have printed four hands or Exit from the deal display screen. There are other print options (not all implemented yet), these you can select by clicking the print type label (currently showing “Print all four hands – With bidding”). The number to the right of Print indicates the number of deals of the current type you would like printed – maximum 99.

As an alternative to displaying certain type of hands, you can select types of deals - click the white label “Hand Type” option at top right of screen. This is comparable to hand type but suitable hands and responding/overcalling hands will be selected.

The type of deal “(aaa) Author Deals” covers several deals I have constructed for training purposes.

Enough of the deal display – have a good play and enjoy. Of course, you may radically disagree with the bid(s) suggested by Baghdad. There are several reasons for that – the most likely is that I have got the rules wrong that Baghdad is following – if so please send me an email quoting the full deal number as shown in the display (1 R4231) and the hand that you disagree with (North/South etc) and I will investigate.

So select Exit and return to the main menu. The Set Access Code button enables you to change the access code you are using (I will email this to you on request) and displays the same screen as you originally got as an unregistered user.

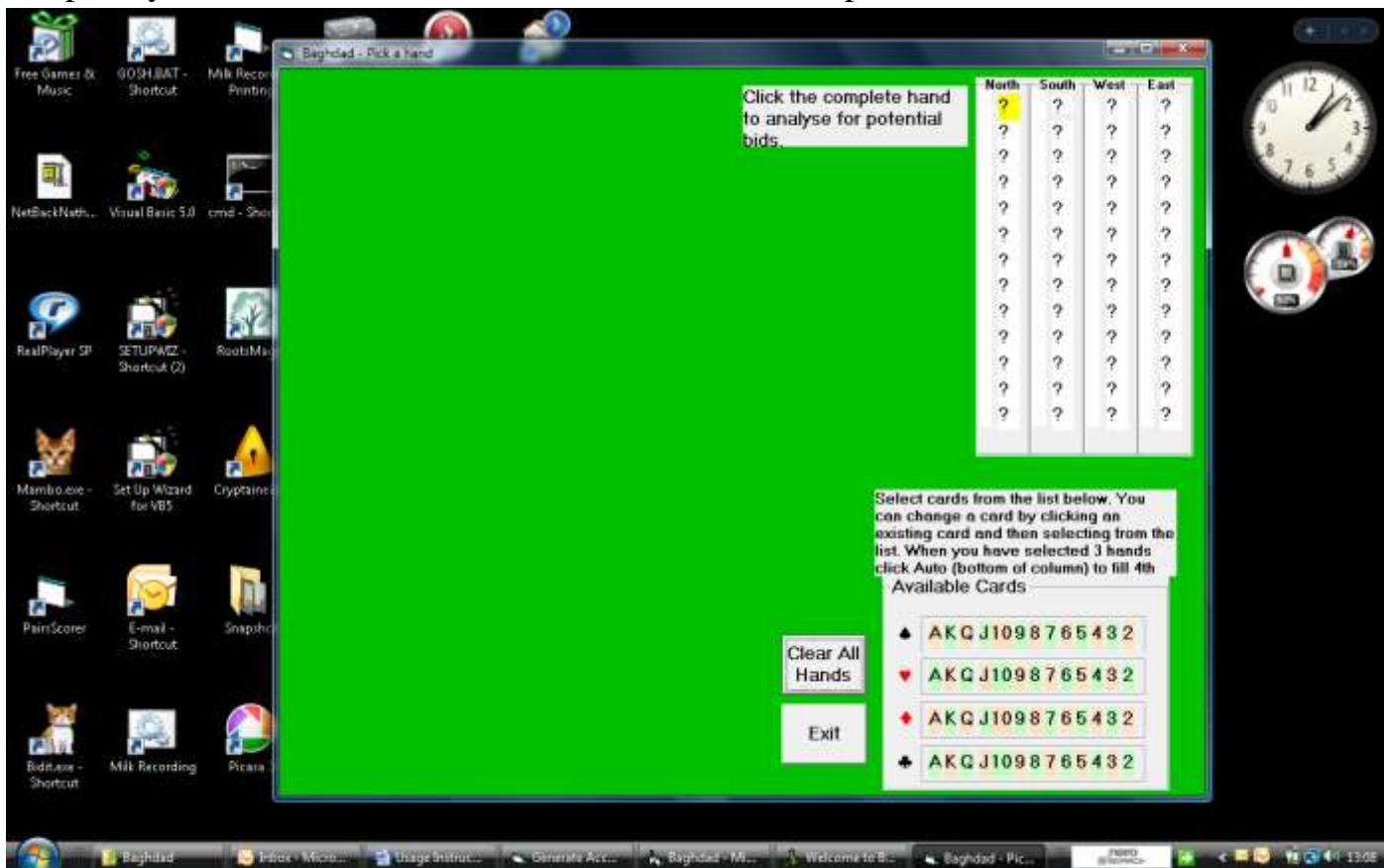
Finally the button “Build Your Hand” – select it and you should get:



You notice you have a complete deal displayed – this will be the last one you displayed with the Display option.

You might have spotted the rather strange sequence of letters and numbers under a hand when displayed. For example the South hand above has “H13/5431 L7 Q3 P4” – this means that the hand has Milton Work Honour Points of 13 (H13), has a shape of 5431, it has 7 Losers (L7), it has 3 Quick tricks (Q3), and has a probable 4 Playing tricks (P4).

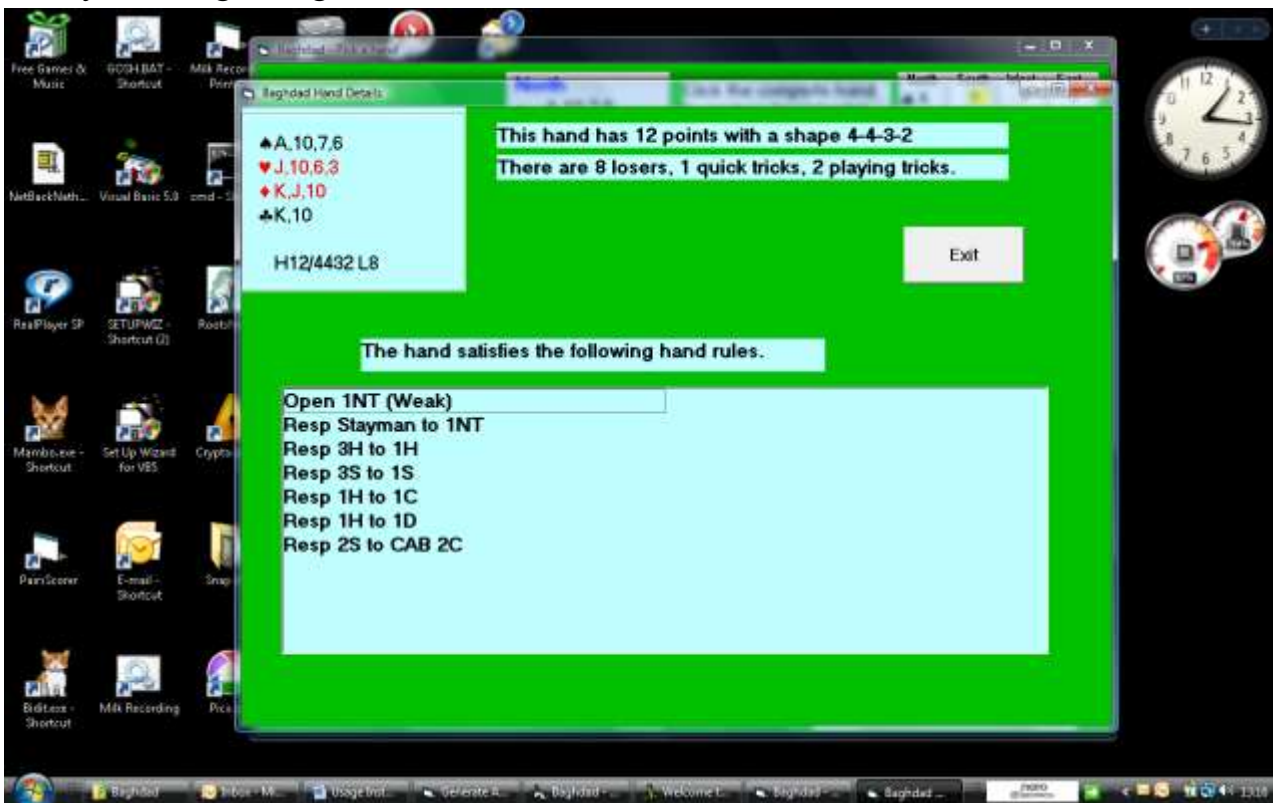
To the right are the four hands also displayed in columnar form. If you want to enter a completely new set of hands, click the Clear All Hands option. You will see as over



You can now select any card from the set at the bottom right by clicking on it. That card will replace the card in yellow in the hand at top of screen – initially a “?” in the North hand. As you select a card, it is removed from the list at the bottom and you can then add another card etc. Once you have completed 13 cards for a hand, the complete hand is then displayed in the traditional format, and you can select cards for the next hand (South then West then East) The screen slot below shows what happens when you have completed 13 selections for North.



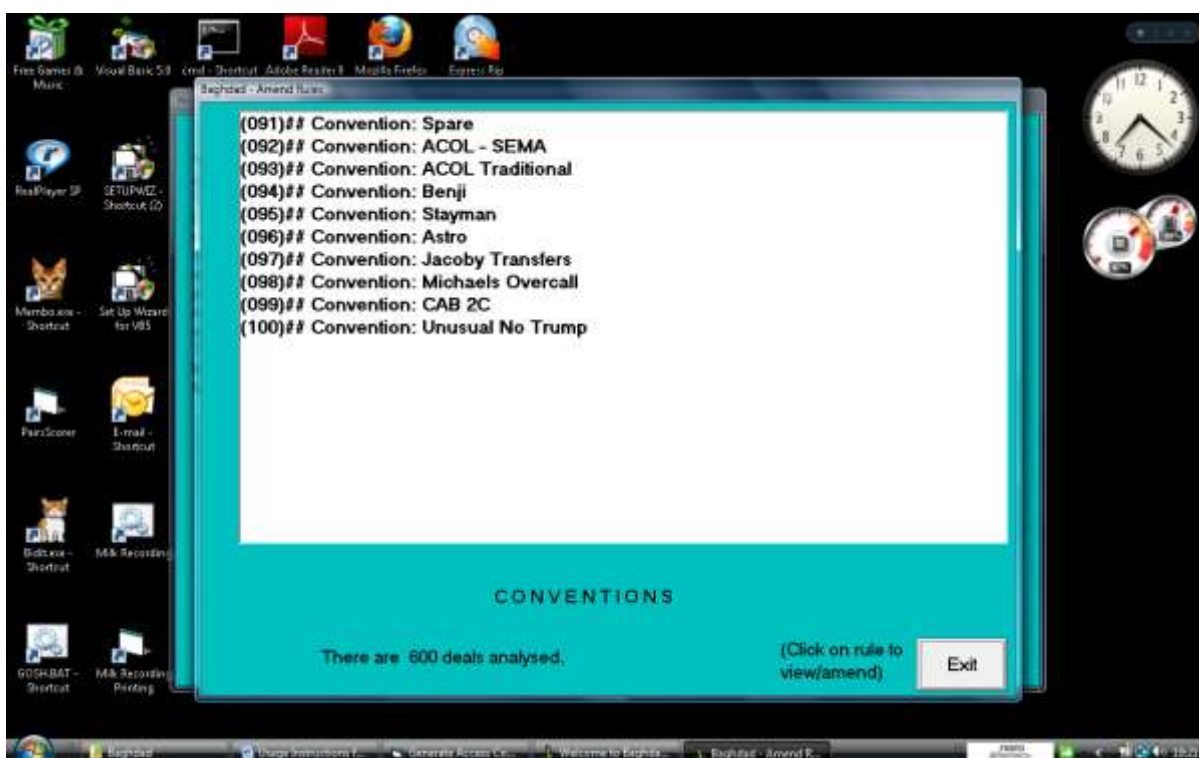
The full 13 cards have been sorted into a standard hand display. If you click anywhere in the reformatted hand you will get Baghdad's view of how to bid, viz.



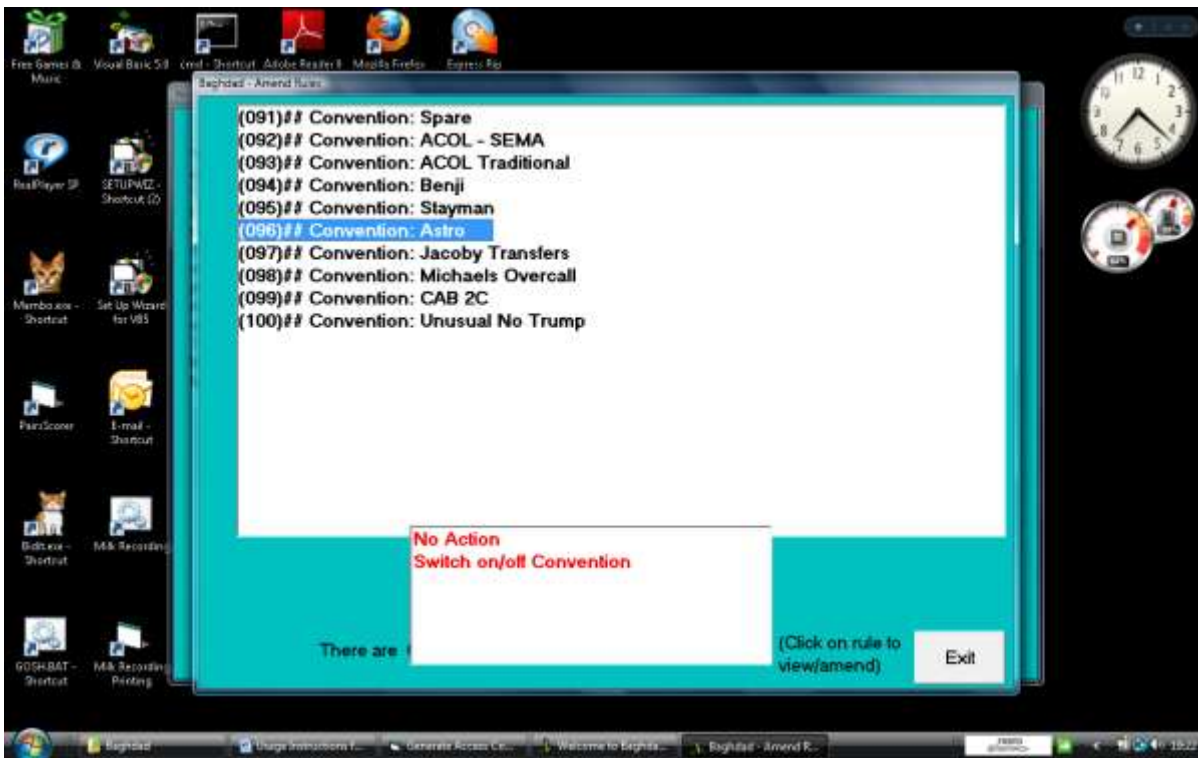
Well that just about covers Baghdad for the normal unregistered user. As a registered user, you get a slightly enhanced main display as below



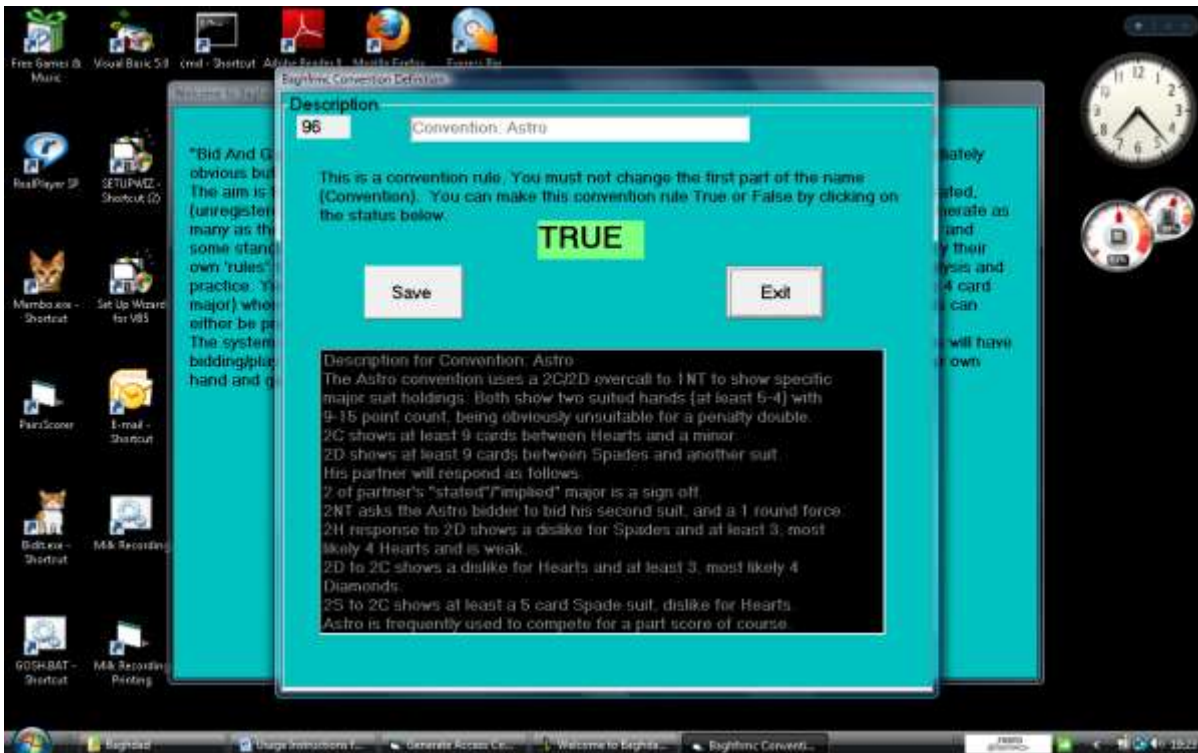
The first additional option enables you to enable and disable certain conventions – it may be that you do not like Astro overcalls to 1NT and would rather not be told about them on the display screens. So Select the Enable/Disable option and you will get a list of the defined conventions.



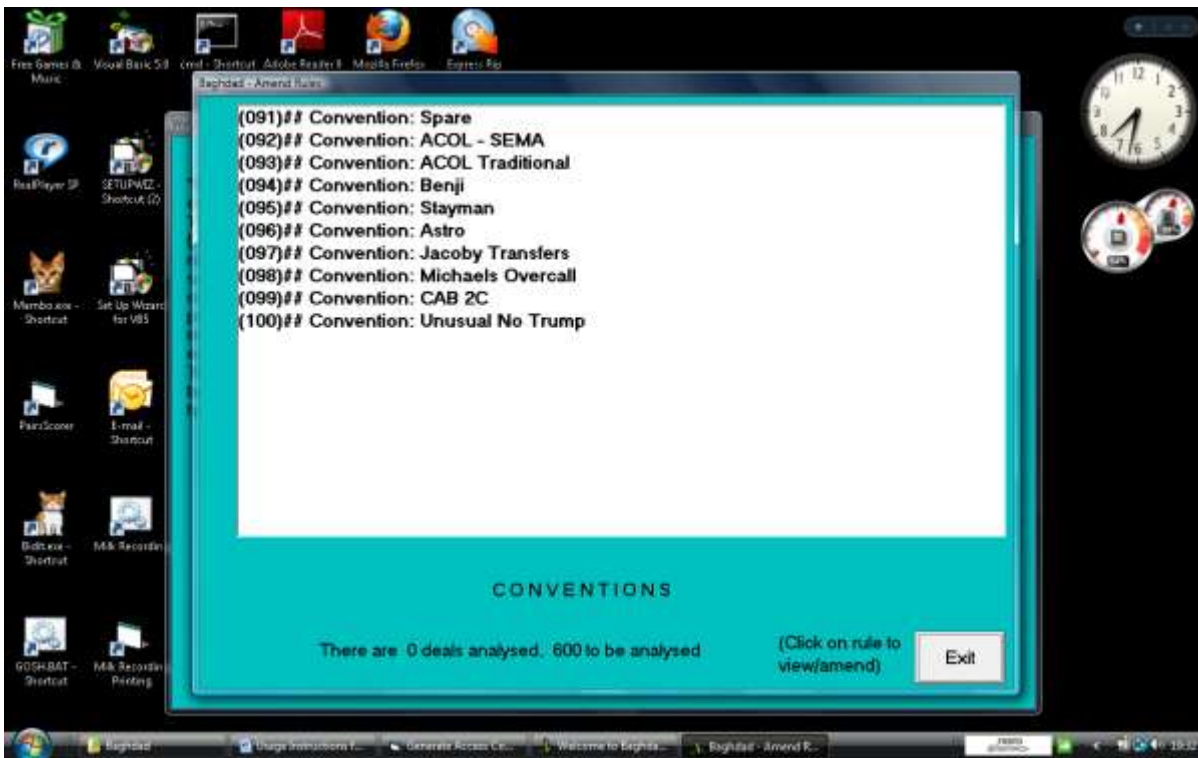
Click on the Astro line, you get



Click on the Switch on/off option, and you get



To turn the rule off click the “TRUE” and it will change to “FALSE” – (clicking again will send it back to “TRUE”). Note by the way the summary at the bottom of the display of the Astro convention. So having set to “FALSE”, click Save and you will get various pop ups advising you that Baghdad is re-evaluating rules etc, and then you will return to the screen.



This looks almost identical to this screen when you displayed it a moment ago – but notice the bottom line “There are 0 deals analysed, 600 to be analysed”. This is because turning off/on a convention means reanalysing all the hands – particularly those that require the use of the convention. This will probably only take a few seconds and will take place behind the scenes. Click Exit – if you are lucky you might see a couple of messages on the main screen saying how far the reanalysis has got – see below with the progress line at the bottom of the screen (which is updated every 2 seconds)



Now redisplay hand 1, select the Show All option, and then click on the South hand



Note that the Astro suggestions have been removed from the list. However, if you like Astro retrace your steps and switch Astro back to TRUE!

Back to the main screen then



In addition, the last option – Get latest database and program. Fairly obviously this will download the latest version of the deliverable database (with 5000 deals) and the latest version of the program from the internet without you having to go through the website etc. Baghdad will invoke a separate sub program to do these downloads, and will only do a download if there is a more recent version available. Some users have experience difficulties using this facility because they have a Firewall installed. Some Firewalls allow you to override, and others well, maybe not. However, you can always download an upgrade to the Software and the database by going to the website and selecting the appropriate upgrade option – refer to separate upgrade instructions.

Finally a word about all the screen displays. You can change the size and position of the screens at your discretion. They were all designed to fit on quite a small physical display screen. You will probably have a larger screen and can increase the displays to suit your wishes. However be aware that when you change a screen display size or position, I attempt to modify all the various text items to fit in the available space – if you reduce screen sizes you might find a few characters get dropped off the end of a displayed item – not likely to be critical. Baghdad will remember the position and size of a display if you exit normally from a screen display (by clicking the Exit button) and will use those values the next time you use that screen format.

Enough for now – play and enjoy. If you want to be, able to define your own rules for hands and deals then I can give you administrator status but I suspect you will have enough to keep you happy for an hour or so!

Roy Rowe 2010-02-22