Bridge Solver Online (BSOL), written by John Goacher, is a free software application which allows you to replay a hand and analyze the results of that replay decision. It is integrated into the BridgeWebs software so any hand that was played at the Vanderbilt Bridge Club can be played again with the click of a button. You can change the contract, the lead, cards played, etc. If you have ever played a hand and thought you might have gotten another trick if you had taken a different line, this is exactly what you need. If you have ever looked at the Double Dummy (DD) analysis makeable contracts and been unable to figure out how you could possibly make that many tricks, BSOL is the answer.



The best way to demonstrate how to use BSOL is to show an example. We will look at Board 25, played in The Common Game and at the Vanderbilt Bridge Club on June 4th. Here is the hand and the traveler:

As you can see, this hand was played in many different contracts with many different results. Nat Harris and I were Pair 20 N/S. We played 1NT by S and made 1. According to the DD analysis, we are not supposed to be able to make 1NT

Looking further, with perfect defense, we will only make 5 tricks and will be down 2. How do you know that?

Click the Play it again button to invoke the Bridge Solver Online application.

| NS | EW | Bid | By | Ld | Tks | +Sc | -Sc | + | - |
|----|----|-----|----|----|-----|-----|-----|---|---|
| A20 | A19 | 1NT | S | ♣4 | 1 | 90 | | 19.50 | 0.50 |
| A15 | A4 | 1NT | S | ♣4 | 1 | 90 | | 19.50 | 0.50 |
| A17 | A8 | 1NT | S | ♦9 | -1 | | 50 | 17.00 | 3.00 |
| A16 | A6 | 2♥ | N | ♦A | -1 | | 50 | 17.00 | 3.00 |
| A9 | A5 | 3♣ | S | ♦7 | -1 | | 50 | 17.00 | 3.00 |
| A6 | A20 | 2♥ | N | ♠2 | -2 | | 100 | 14.50 | 5.50 |
| A4 | A16 | 2♥ | N | ♣2 | -2 | | 100 | 14.50 | 5.50 |
| A21 | A21 | 3♣ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A2 | A12 | 2♦ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A1 | A10 | 3♦ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A18 | A15 | 2♦ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A14 | A2 | 3♦ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A19 | A17 | 2♦ | E | ♣A | 3 | | 110 | 10.50 | 9.50 |
| A13 | A13 | 3♦ | E | ♣A | 4 | | 130 | 6.00 | 14.00 |
| A8 | A3 | 3♦ | E | ♣A | 4 | | 130 | 6.00 | 14.00 |
| A10 | A7 | 3♦ | E | ♣A | 4 | | 130 | 6.00 | 14.00 |
| A7 | A1 | 2NT | W | ♥3 | 3 | | 150 | 3.00 | 17.00 |
| A3 | A14 | 2NT | N | ♠2 | -3 | | 150 | 3.00 | 17.00 |
| A5 | A18 | 4♥ | N | ♣3 | -3 | | 150 | 3.00 | 17.00 |
| A11 | A9 | 2♦* | E | ♣A | 3 | | 380 | 0.50 | 19.50 |
| A12 | A11 | 2♦* | W | ♣8 | 3 | | 380 | 0.50 | 19.50 |

When you click on the Play it again button the first time, you will see the following window:

**Play it Again!!**

You can view this hand and play it again in your favourite "Play it Again!!" software. There are a number of software packages available to do this. **Please see the Guide for further details.**

Simply, click the appropriate button and follow the instructions.

- [PC] - Create a file to open directly in the "Play it Again!" software installed on your PC. You will need to click, usually, [Open] and then the software will display.
- [BS Online] - Use Bridge Solver Online to analyse winning lines of play interactively on any PC, Mac, smartphone, or tablet. This opens immediately in this Window.

Bridgewebs will remember the Viewer after the first time, click [Switch Viewer] to return here and use a different viewer.

[PC] [BS Online] [Guide] [Close]

For this documentation, I recommend you click on the BS Online button. BS Online can be used from a web browser on any mobile or desktop device without installation. That will bring up the following screen:

**Bridge Solver Online**

June 4, 2018 - Monday Morning Session

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Bridge Solver Online:**
**John Goacher**

Double Dummy Solver Module:
**Bo Haglund**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11      9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

[Results Analysis] (?)   [<] [Go To...] [>]   [Edit]   [Play] [Options] [Help]   [Analyse]

Start playing a contract interactively by clicking on an entry in the makeable contracts table (including entries shown as '-' or '*'). In this case, the board was played in Notrump by South so that box is highlighted. If you click on that box, the following screen will display

The contract is shown with the expected result assuming optimal play by declarer and the defenders.

Optimum Contract      North is the dealer                    E/W Vulnerable

**Bridge Solver Online**                                                    ✕

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♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 0**
**EW Tricks: 0**

♠ A₈ 7₈
♥ A₇ Q₇ 10₇ 5₆
♦ 9₈ 7₈ 5₈
♣ J₇ 10₇ 6₅ *4₅

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11          9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

< | Stop | Options | Help

The cards of the player on lead are highlighted. The small numbers (like the values on Scrabble tiles) indicate the number of tricks which can be made by that player if that card is selected. Cards highlighted in green give the best result for that player (assuming optimal play by all players from that point forward), the cards in yellow an inferior result. The number of possible tricks will update as each card is played.

A card value preceded by a blue asterisk indicates the lead card that was actually played by the defender on lead in the selected contract.

In this case, if West leads the ♣6 or ♣4, the defense can only make 5 tricks allowing declarer to make 2NT. If he leads the ♣J or ♣10, they can make 7 tricks, setting declarer 1 trick. If he leads an optimal card, (any of the cards highlighted in green), the defenders will make 8 tricks and declarer will go down 2.

Click on a green or yellow card to play it. In this case I will click on the ♣4.

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♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9₈ 8₈ 2₈

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 0**
**EW Tricks: 0**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6  4

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

25

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

6
11       9
14

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

| < | Stop | Options | Help |
|---|---|---|---|

The ♣4 is now highlighted in blue, indicating it has already been played.  You must now select one of the clubs in the North hand by clicking on it.  Play continues by clicking the cards from each hand that you want to play.

If you make a mistake or would like to back up, click the "<" button.

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♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8  2

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 0**
**EW Tricks: 0**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6  4

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣  3

25

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A₆ K₆ Q₆ 7₈ 5₈

6
11       9
14

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

South can win the first trick with the ♣5 and with optimal play, can make 8 tricks.

**June 4, 2018 - Monday Morning Session**

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 1**
**EW Tricks: 0**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

♠ Q₆ 10₆ 4₆
♥ 9₈ 6₈ 2₈
♦ K₄ 6₄
♣ A₈ K₈ Q₈ 7₅ 5

|   | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|----|
| N | 1 | - | - | 1 | -  |
| S | 1 | - | - | 1 | -  |
| E | - | 4 | - | - | 1  |
| W | - | 4 | 1 | - | 1  |

6
11          9
14

Since South won the first trick, the trick count has been updated.

It's now time for South to play to the second trick and you can see that the choice of suits can make a big difference in timing and number of tricks possible. As an example, a spade lead at this point can cost you two tricks. The optimal "double dummy" line is to lead a heart or a big club.

### June 4, 2018 - Monday Morning Session

**Optimum:
EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

NS Tricks: 2
EW Tricks: 0

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

**25**

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6

11          9

14

♠ Q₆ 10₆ 4₆
♥ 9₈ 6₈ 2₈
♦ K₅ 6₅
♣ A K₇ Q₇ 7₅ 5

|   | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

< | Stop | Options | Help

I chose to lead the ♣A and won that trick. Now I need to lead a heart to take the finesse.

### June 4, 2018 - Monday Morning Session

**Optimum:
EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

NS Tricks: 2
EW Tricks: 0

♠ A 7
♥ A₅ Q₅ 10₅ 5₅
♦ 9 7 5
♣ J 10 6 4

**25**

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6

11          9

14

♠ Q 10 4
♥ 9 6 2
♦ K 6
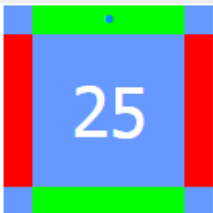♣ A K Q 7 5

|   | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

< | Stop | Options | Help

I lead the ♡2 and assume West ducks with the 5.

## June 4, 2018 - Monday Morning Session

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

Contract: 1NT-2 by S
(originally played in 1NT)

NS Tricks: 2
EW Tricks: 0

♠ J 6 5 3
♥ K₇ J₈ 4₆ 3₆
♦ J 4
♣ 9 8 2

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11      9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

`<`  `Stop`  `Options`  `Help`

If I put in the ♡J I can still make 8 tricks. If I put in the ♡K, I can only make 7 tricks.

## June 4, 2018 - Monday Morning Session

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

Contract: 1NT-2 by S
(originally played in 1NT)

NS Tricks: 3
EW Tricks: 0

♠ J₇ 6₇ 5₇ 3₇
♥ K₆ J 4₇ 3₇
♦ J₇ 4₇
♣ 9₈ 8 2

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11      9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

`<`  `Stop`  `Options`  `Help`

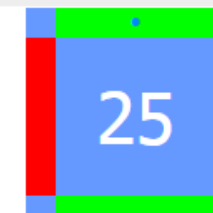Now if I lead anything but the ♣9, I will make fewer tricks than the optimal line

## June 4, 2018 - Monday Morning Session

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 4**
**EW Tricks: 0**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

25

♠ Q₇ 10₇ 4₇
♥ 9₈ 6₈ 2
♦ K₅ 6₅
♣ A K Q₈ 7₆ 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

6   11   9   14

< | Stop | Options | Help

Now I lead the ♡6 and win the ♡K

## June 4, 2018 - Monday Morning Session

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

♠ J₇ 6₇ 5₇ 3₇
♥ K J 4₇ 3₇
♦ J₈ 4₈
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 5**
**EW Tricks: 0**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

25

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

6   11   9   14

< | Stop | Options | Help

Now, I'll lead the ♦4 towards my hand and show what happens if East wins with his ♦A.

## June 4, 2018 - Monday Morning Session

Optimum:
EW 3D

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

Contract: 1NT-2 by S
(originally played in 1NT)

NS Tricks: 5
EW Tricks: 1

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11        9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

< | Stop | Options | Help

East will lead his ♠2 towards partner's ♠A.

## June 4, 2018 - Monday Morning Session

Optimum:
EW 3D

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

Contract: 1NT-2 by S
(originally played in 1NT)

NS Tricks: 5
EW Tricks: 2

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11        9
14

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

< | Stop | Options | Help

Now West can cash his hearts and exit with a diamond. In this deal, you can see he could lead diamonds first, which will set up partner's diamond winners and E/W will still make 5 tricks. With BSOL you can try it either

way and see what happens. It is a great tool for improving your play of the hand, defense, end plays, squeezes, etc. Let's try the ◇7 and see what happens.

**June 4, 2018 - Monday Morning Session**

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 6**
**EW Tricks: 2**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

**25**

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11    9
14

♠ Q₇ 10₇ 4
♥ 9₆ 6 2
♦ K 6
♣ A K Q₈ 7₆ 5

|   | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|----|
| N | 1 | – | – | 1 | – |
| S | 1 | – | – | 1 | – |
| E | – | 4 | – | – | 1 |
| W | – | 4 | 1 | – | 1 |

< | Stop | Options | Help

South wins the ◇K and cashes his clubs from the top.

**June 4, 2018 - Monday Morning Session**

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 7**
**EW Tricks: 2**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

**25**

♠ K 9 8 2
♥ 8 7
♦ A Q 10 8 3 2
♣ 3

6
11    9
14

♠ Q₇ 10₇ 4
♥ 9₇ 6 2
♦ K 6
♣ A K Q 7₈ 5

|   | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|----|
| N | 1 | – | – | 1 | – |
| S | 1 | – | – | 1 | – |
| E | – | 4 | – | – | 1 |
| W | – | 4 | 1 | – | 1 |

< | Stop | Options | Help

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**Optimum:**
**EW 3D**

LoTT: 17-17 = 0

♠ J 6 5 3
♥ K J 4 3
♦ J 4
♣ 9 8 2

**Contract: 1NT-2 by S**
(originally played in 1NT)

**NS Tricks: 7**
**EW Tricks: 2**

♠ A 7
♥ A Q 10 5
♦ 9 7 5
♣ J 10 6 4

25

♠ K3 95 8 2
♥ 8 7
♦ A Q 10₅ 8₄ 3 2
♣ 3

♠ Q 10 4
♥ 9 6 2
♦ K 6
♣ A K Q 7 5

6
11        9
14

| | ♣ | ♦ | ♥ | ♠ | NT |
|---|---|---|---|---|---|
| N | 1 | - | - | 1 | - |
| S | 1 | - | - | 1 | - |
| E | - | 4 | - | - | 1 |
| W | - | 4 | 1 | - | 1 |

<     Stop   Options   Help

Here it is time for East to discard on South's final club. Suppose he has forgotten the count and chooses to discard a diamond. If he discards the ◇8, his side can only make 4 tricks because he will be thrown in with the ♠K and can win the ◇10 but will then have to lead the ♠9 to North's ♠Q. If he discards the ◇10, when he wins the ♠K he can lead his ◇8 to West's ◇9 who then has 2 good hearts to make their 5 tricks.