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Alice in Wonderland <sup>[3]</sup>

Alice, an experimental [open source chess engine](#) under the [GNU General Public License](#) written by [Sven Reichard](#) in [C++](#), compliant with the [Chess Engine Communication Protocol](#). Alice is an [object oriented](#) program developed under [GCC](#) and [Linux](#). The board is a [vector](#) of 64 [pointers](#) to [pieces](#), while piece is an [abstract class](#), with intermediate subclasses for common piece properties such as [sliding](#) versus none sliding pieces, and finally instantiable subclasses for the concrete pieces, like [Pawn](#), [Rook](#), etc., and "null pieces" for the empty squares <sup>[1]</sup>. [Jim Ablett](#) provides recent compiles for 32/64-bit [Windows](#) and [Linux](#) <sup>[2]</sup>.

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## Bitboards

Alice is an object oriented [Bitboard](#) engine, applying [Rotated Bitboards](#) to determine [sliding piece attacks](#). Size of of the encapsulated Bitboard class is 8 by unsigned long long number <sup>[4]</sup>.

```
namespace Alice
{
    class BitboardIterator;
    class Bitboard
    {
    public:
        typedef BitboardIterator Iterator;
        Bitboard( unsigned long long n = 0ull);
        ~Bitboard();
        //operator unsigned long long() const;
        Bitboard& operator|=( const Bitboard& b );
        Bitboard& operator&=( const Bitboard& b );
        Bitboard operator~( ) const;
        ...
    private:
        unsigned long long number;
        static std::vector<unsigned long long> setMask;
        static std::vector<unsigned long long> clearMask;
        ...
        static Bitboard fileAttacks[256][64];
        static Bitboard rankAttacks[256][64] ;
        static Bitboard upDiagonalAttacks[256][64];
        static Bitboard downDiagonalAttacks[256][64] ;
        ...
    };
};
```

## See also

- [Lewis Carroll characters](#)
- [Given Name](#)

## Forum Posts

- [Gestatten: Alice](#) by [Sven Reichard](#), [CCC](#), June 23, 2002
- [First draw against GnuChess](#) by [Sven Reichard](#), [CCC](#), November 26, 2003
- [Alice new Winboard engine](#) by Pablo, [Winboard Forum](#), March 18, 2005
- [Alice: A reintroduction](#) by [Sven Reichard](#), [CCC](#), July 15, 2011
- [Sorry guys, I have to ask for another engine: Alice](#) by [Arturo Ochoa](#), [CCC](#), December 03, 2012



5. ^ [Lewis Carroll's](#) diagram of the story as a chess game, [Through the Looking-Glass - Chess](#)
6. ^ [Glen Robert Downey](#) (1998). *The Truth About Pawn Promotion: The Development of the Chess Motif in Victorian Fiction*. Ph.D. thesis, [University of Victoria pdf](#) » [Promotions](#)
7. ^ [Lewis Carroll's chess problem | ChessVibes](#), July 14, 2008

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