In Artificial Intelligence, especially in area of constraint programming, it's popular to design various modeling languages which allow solving problems on domain level and by using domain specific abstractions. Techniques known from research on Domain-Specific Languages are often useful in this effort. Functional programming languages offer new tools for designing such languages, particularly Domain-Specific Embedded Languages. This work investigates the advantages and disadvantages of using functional programming for designing and implementing a Domain-Specific Embedded Language for state space search problems.