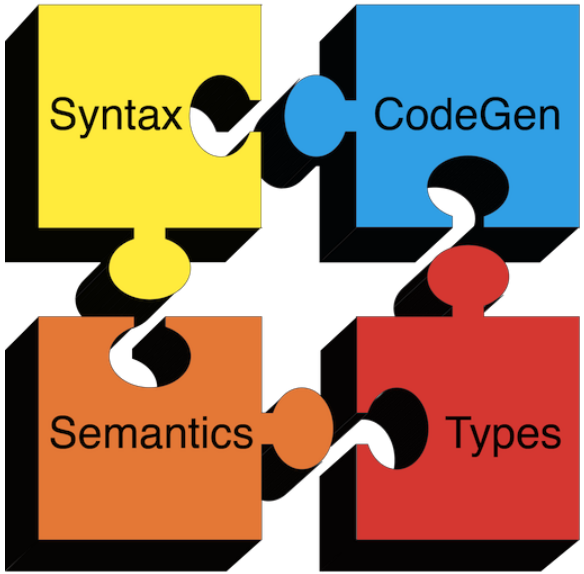
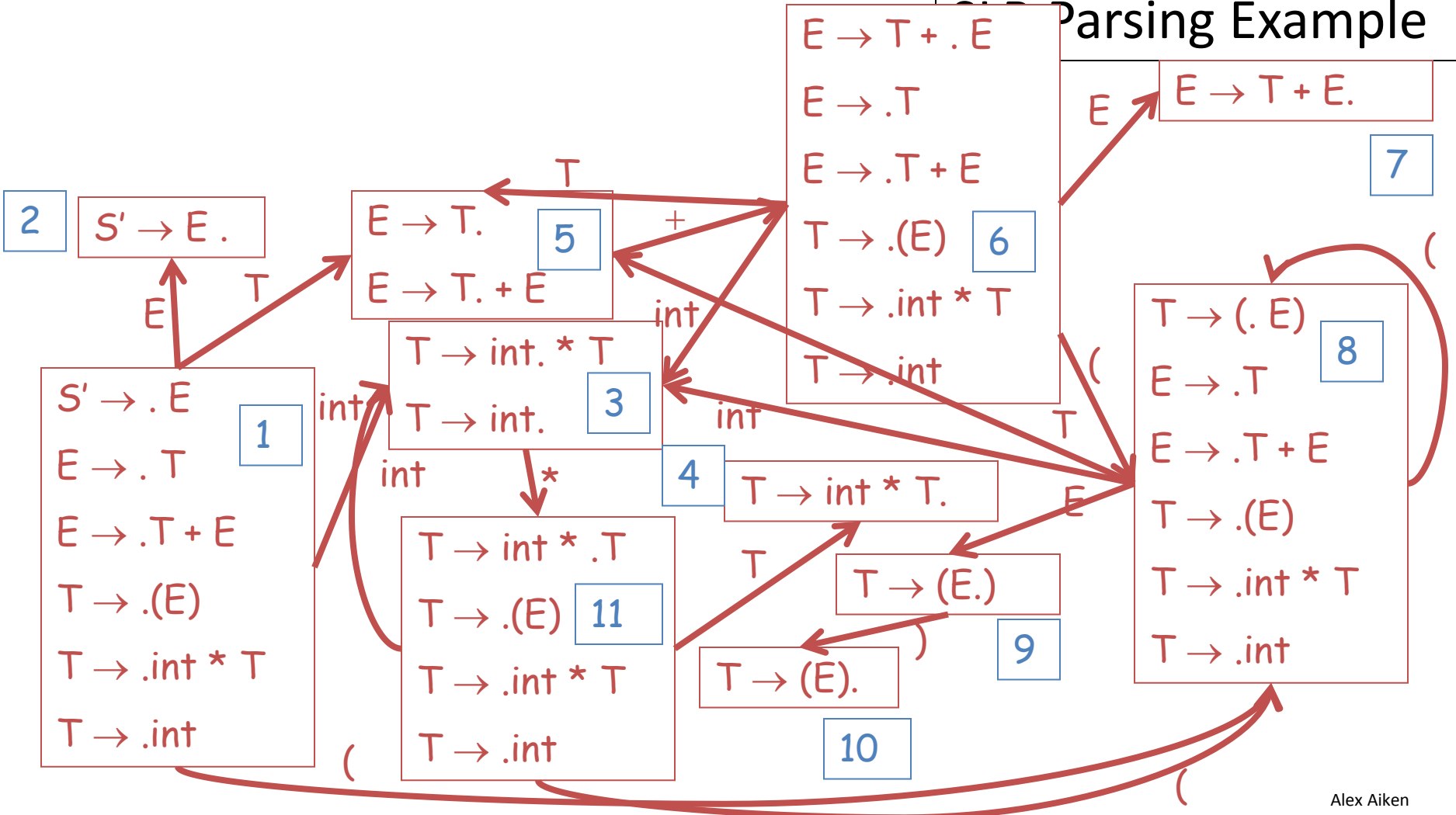



# Compilers

## SLR Parsing Example

# Parsing Example

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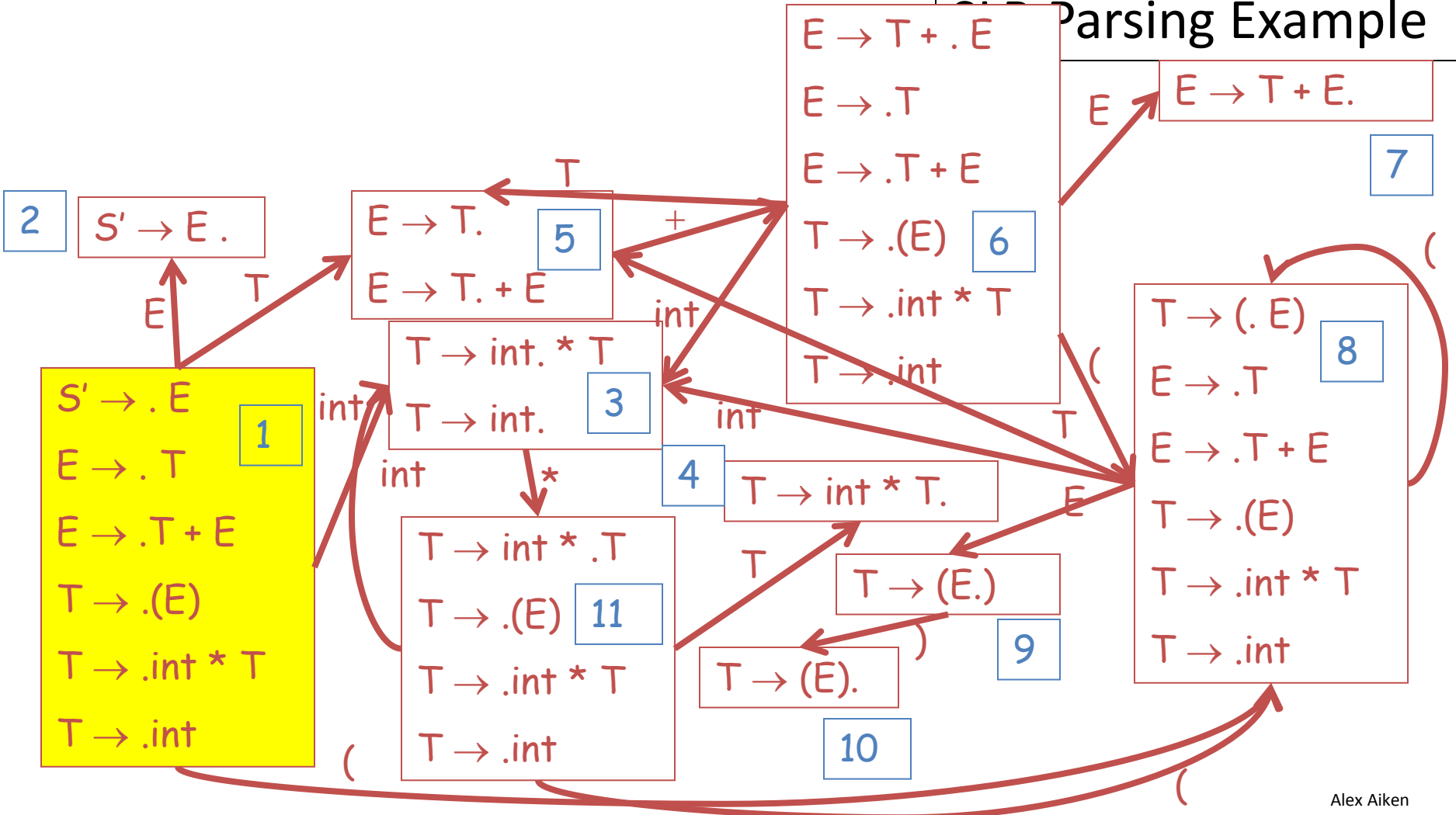
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
| --- | --- | --- |
| \|int * int$ | | |

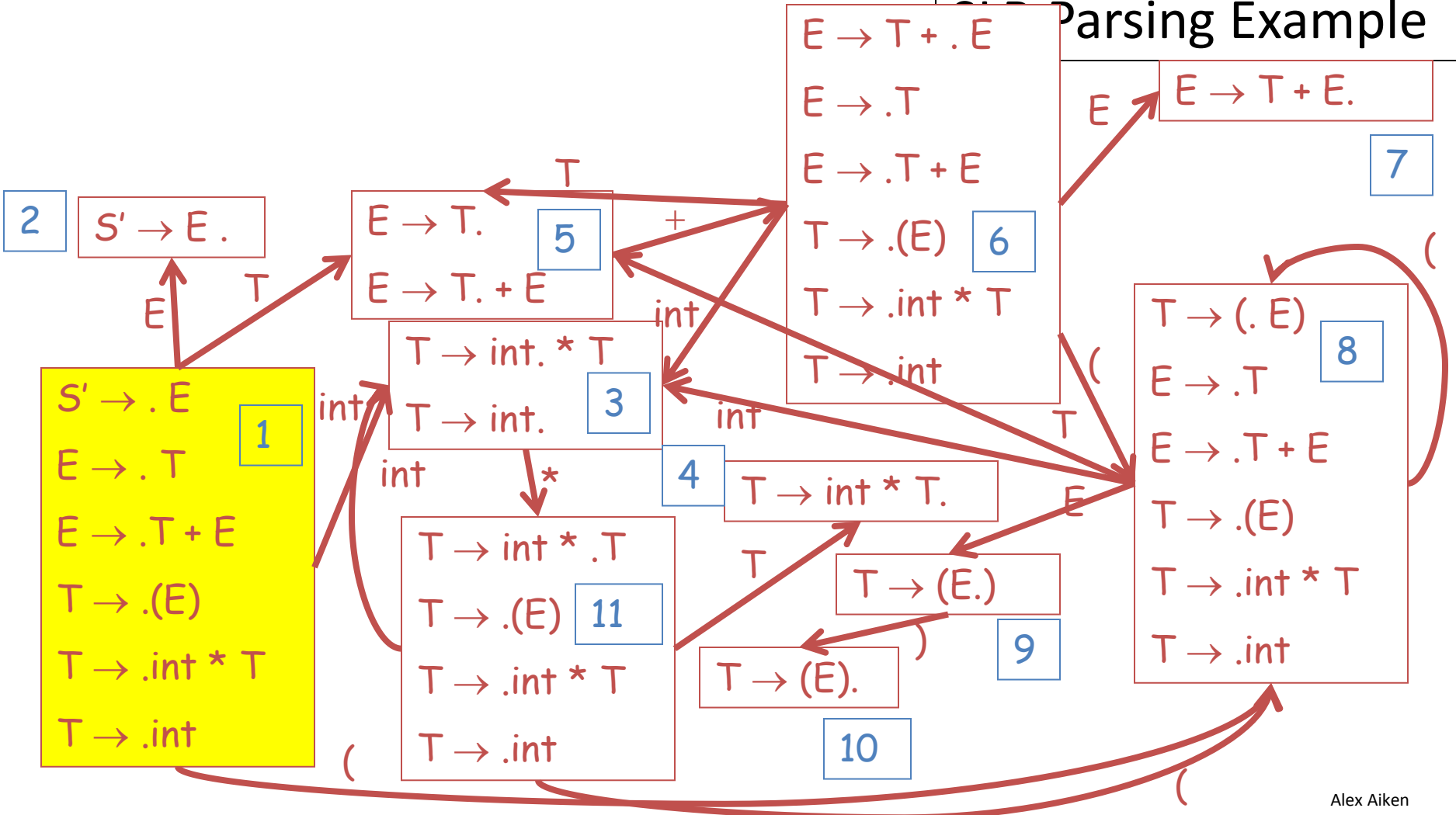
# Parsing Example



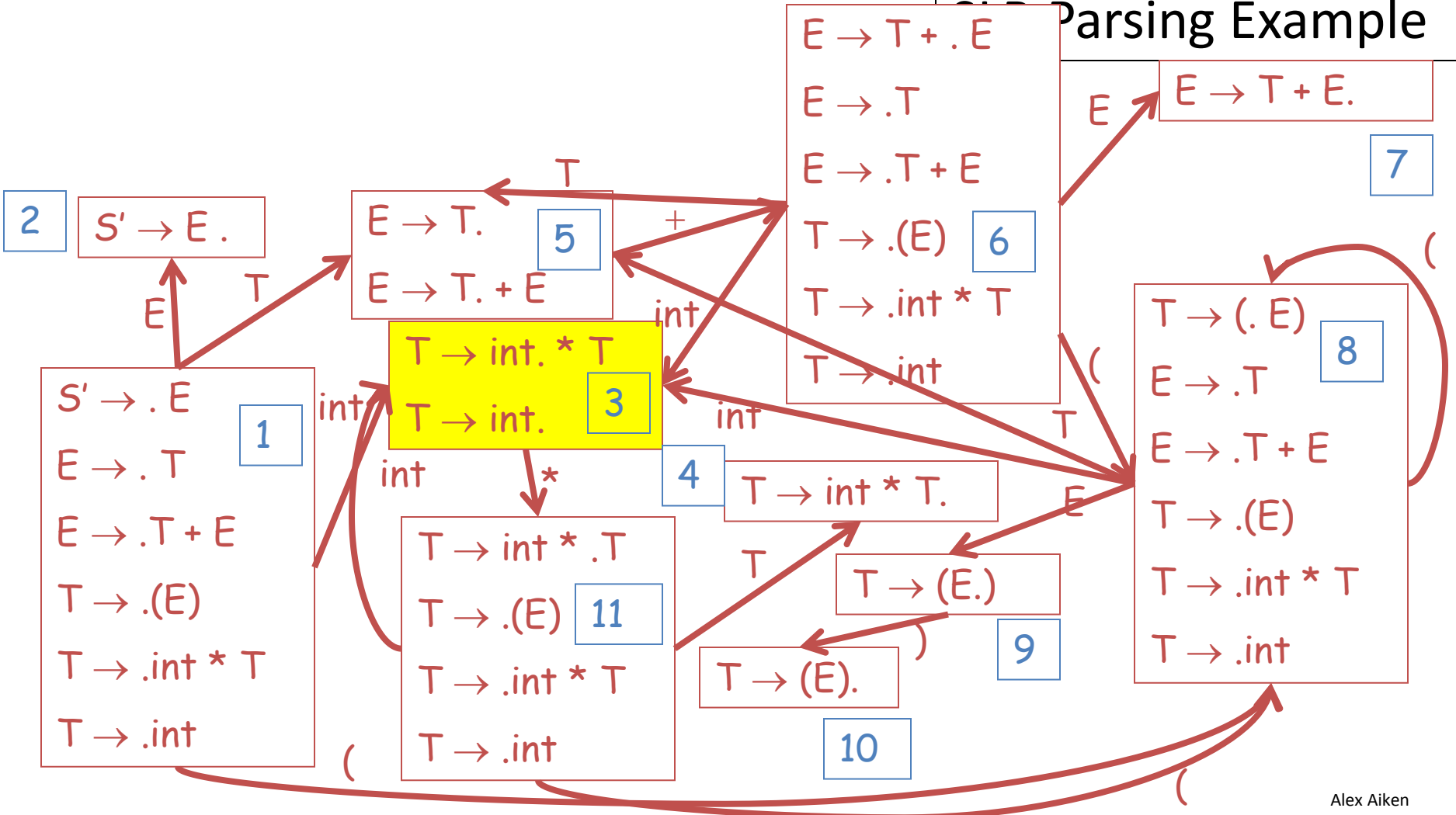
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | | |

# Parsing Example



# Parsing Example

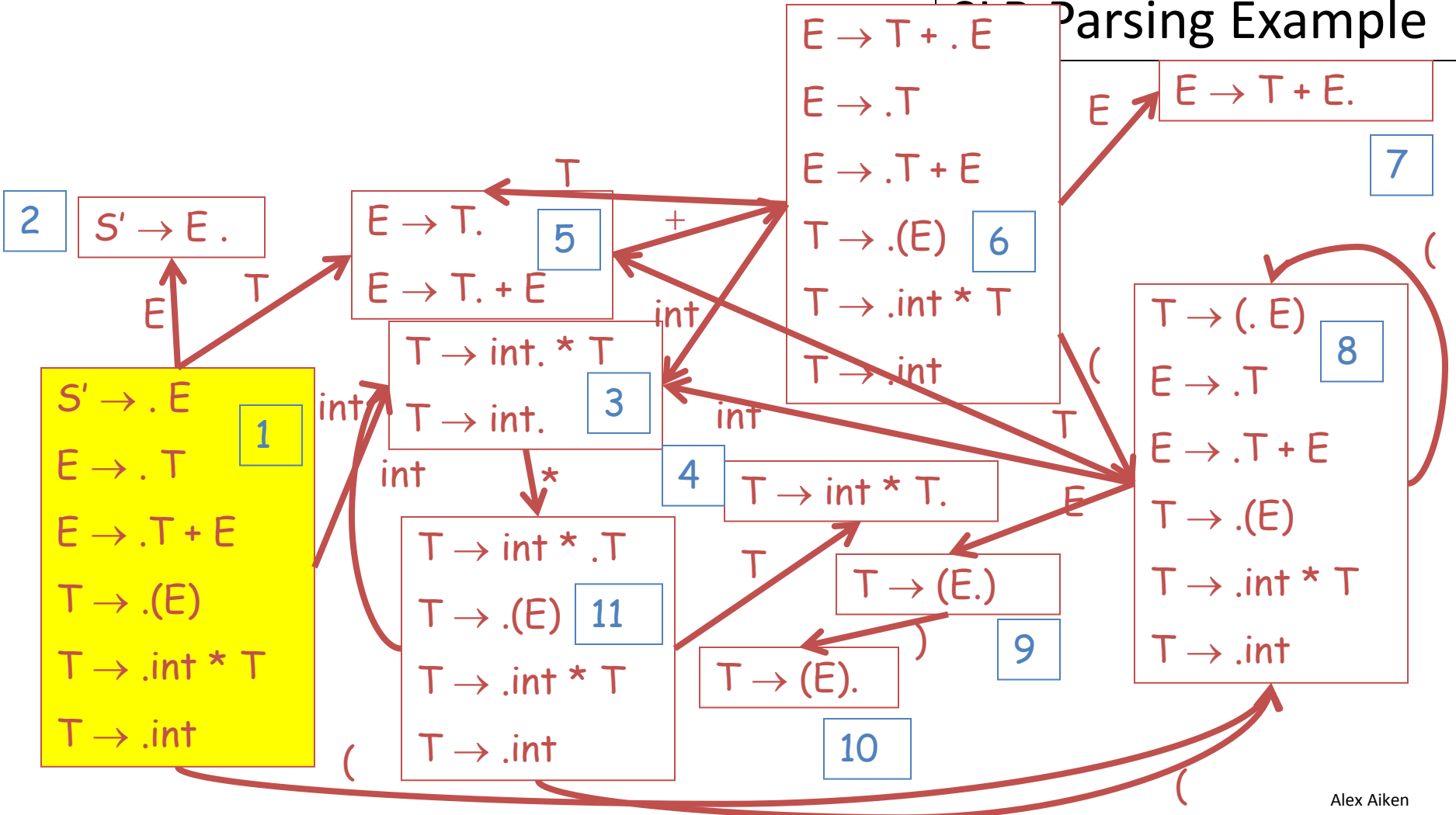



Alex Aiken

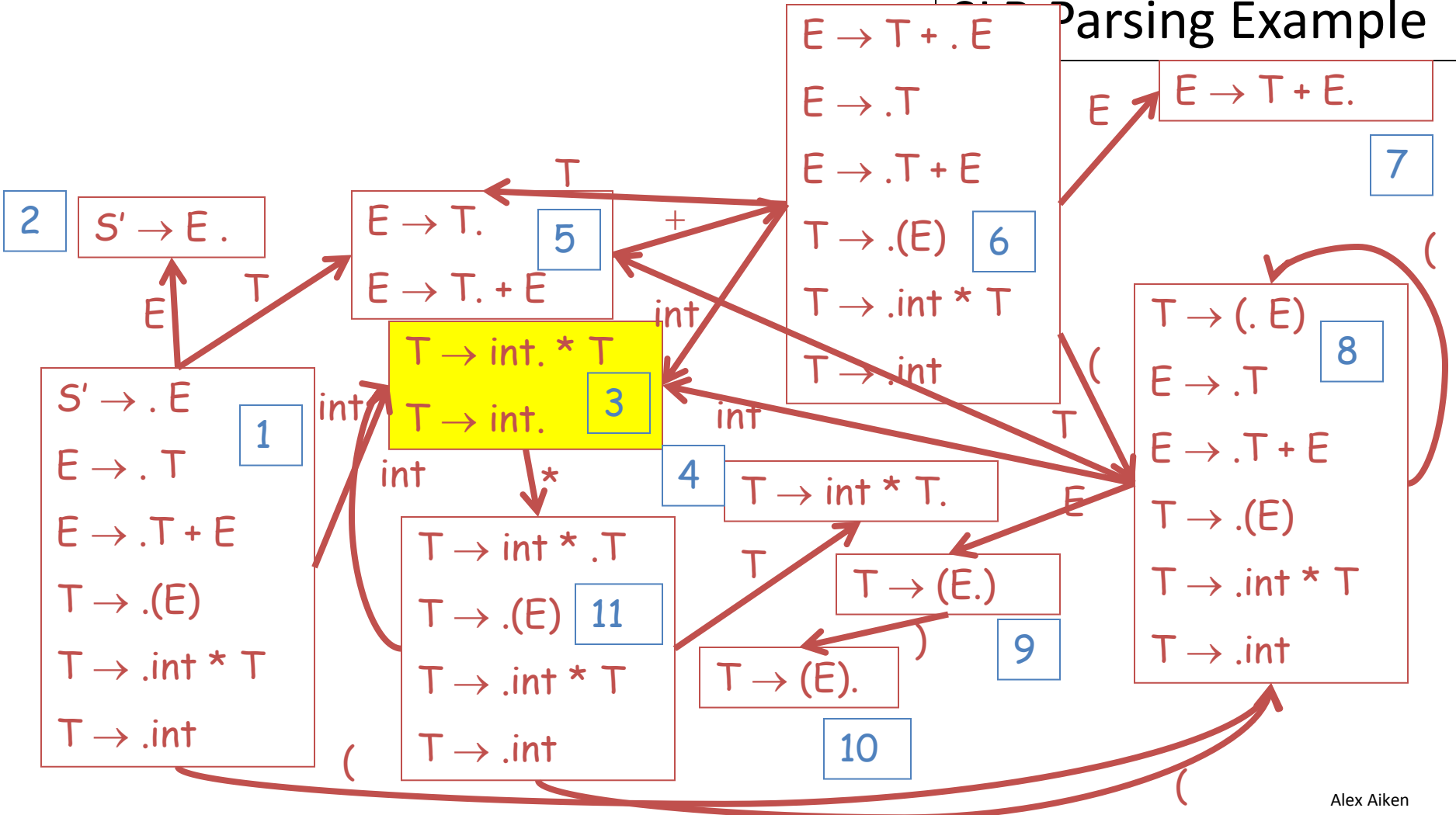
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | | |

# Parsing Example



# Parsing Example

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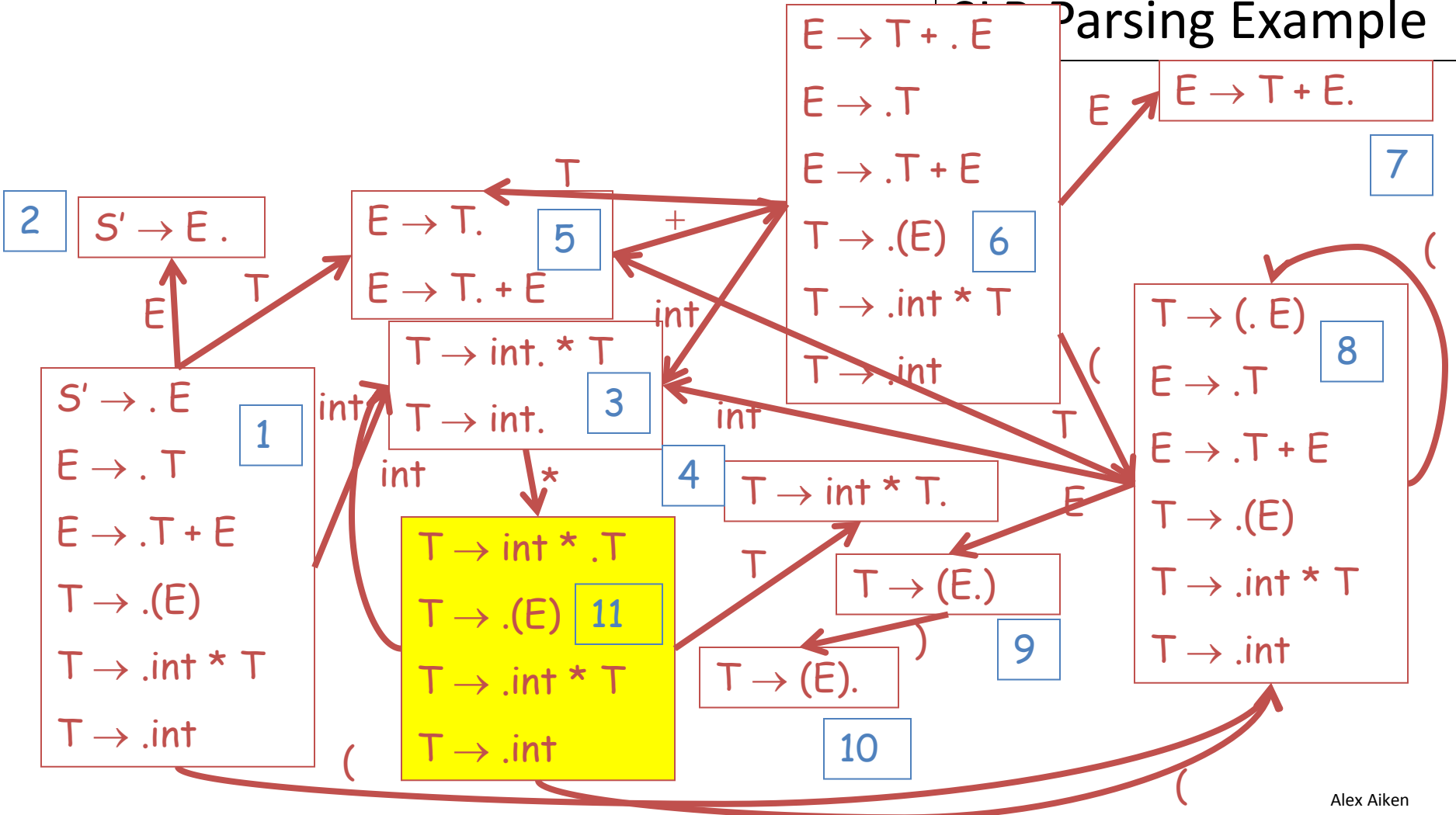
# Parsing Example

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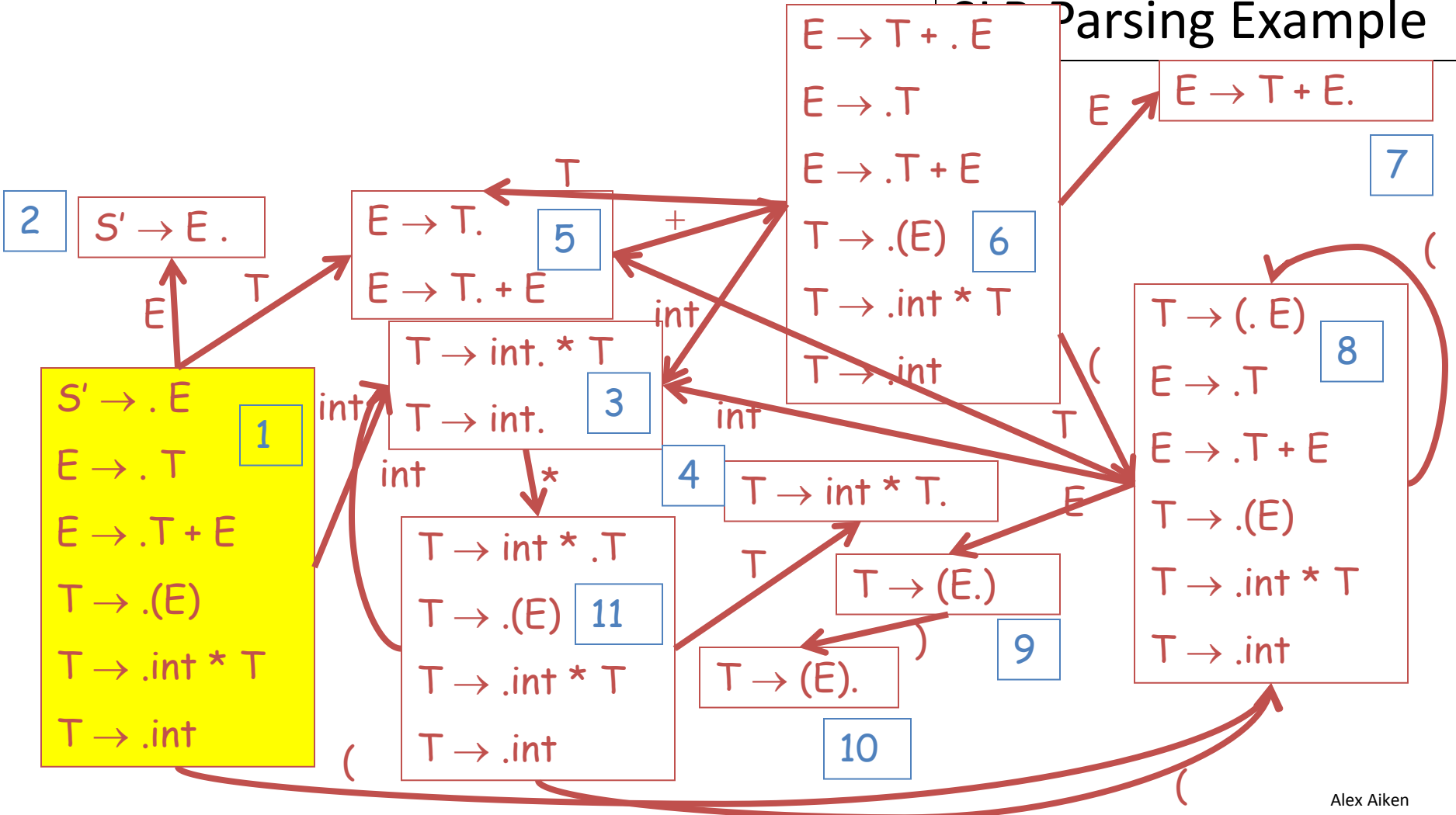
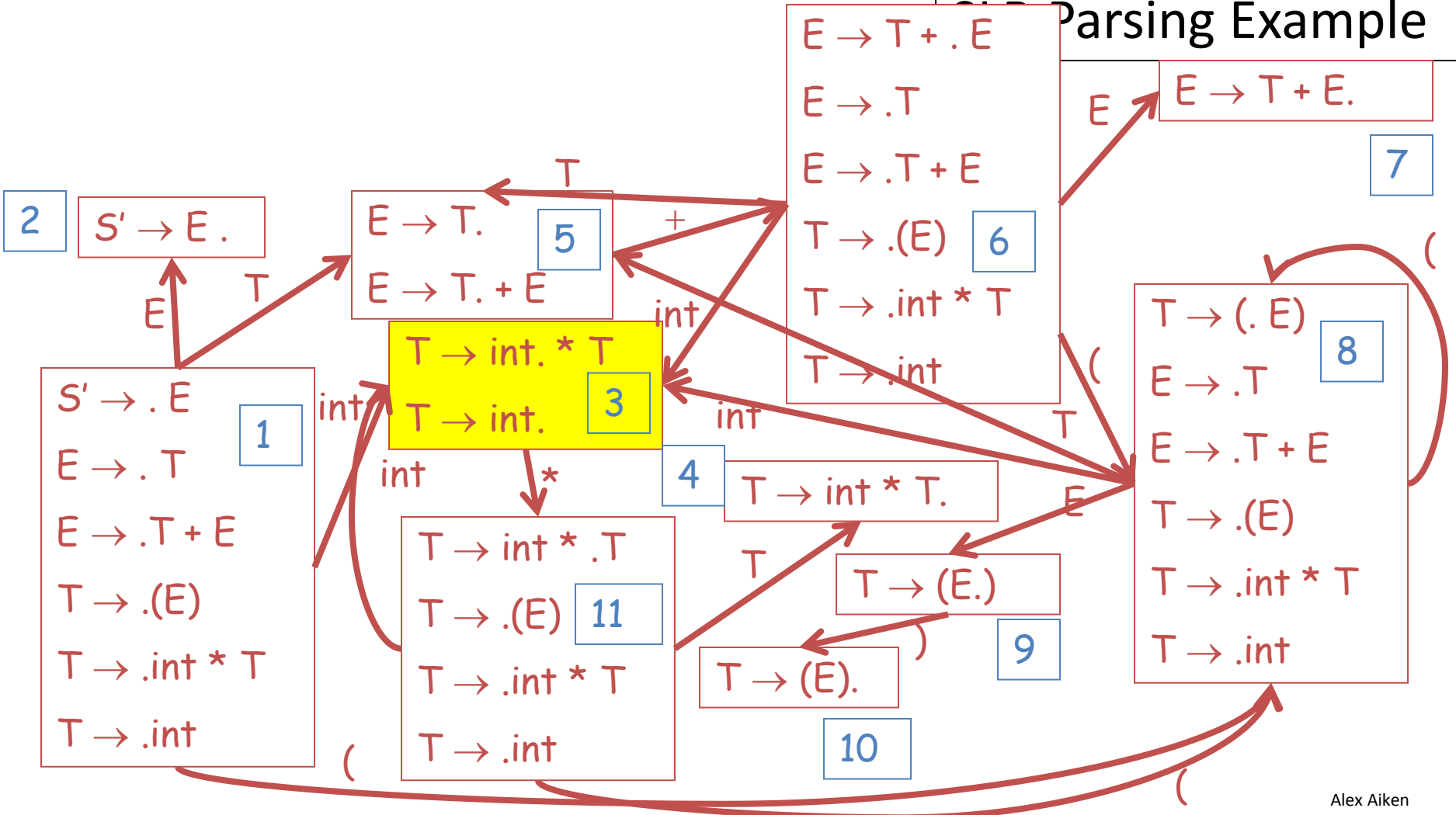
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | 11 | shift |
| int * int \|$ | | |

# Parsing Example



# Parsing Example

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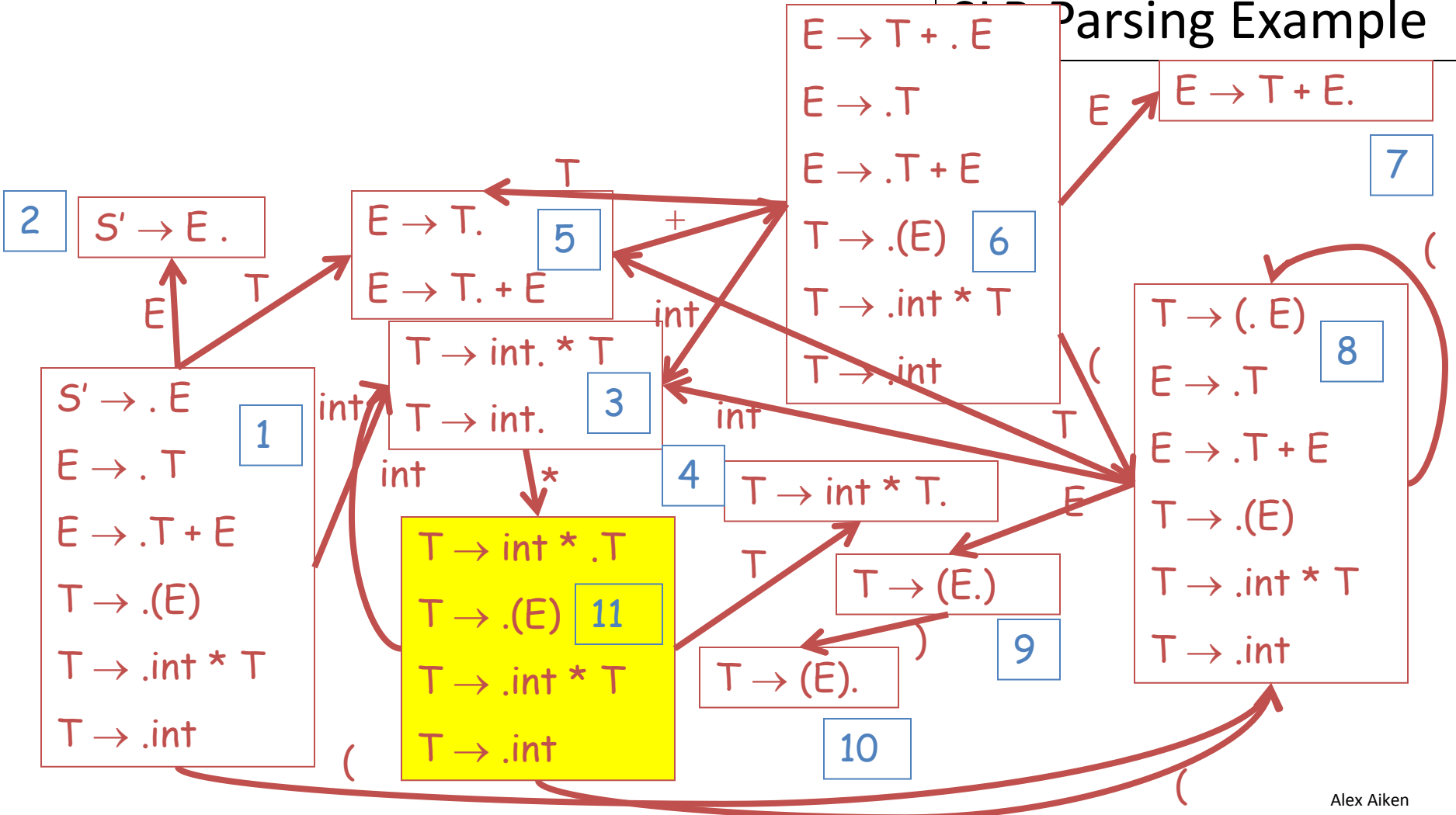
# Parsing Example

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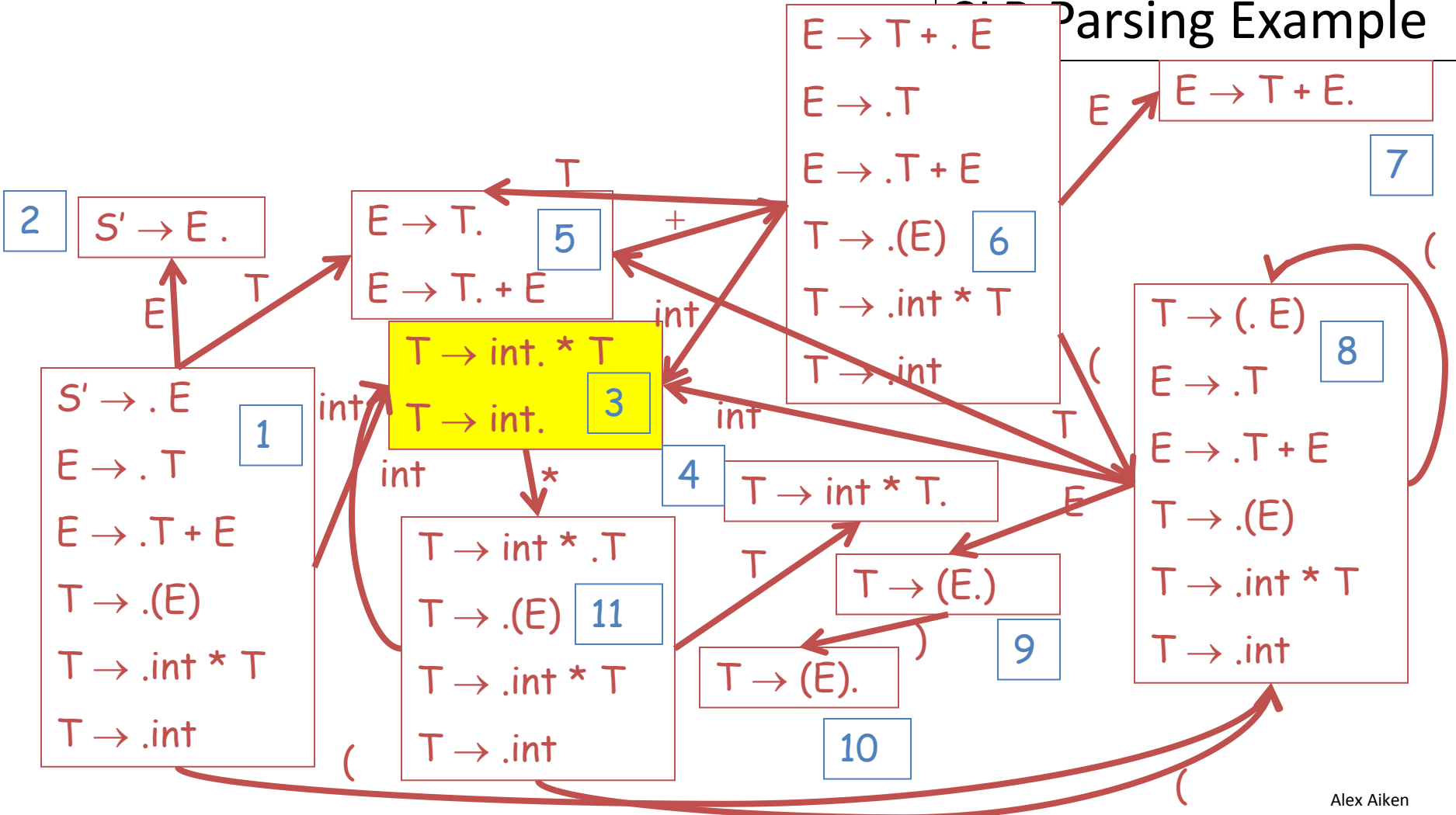
# Parsing Example

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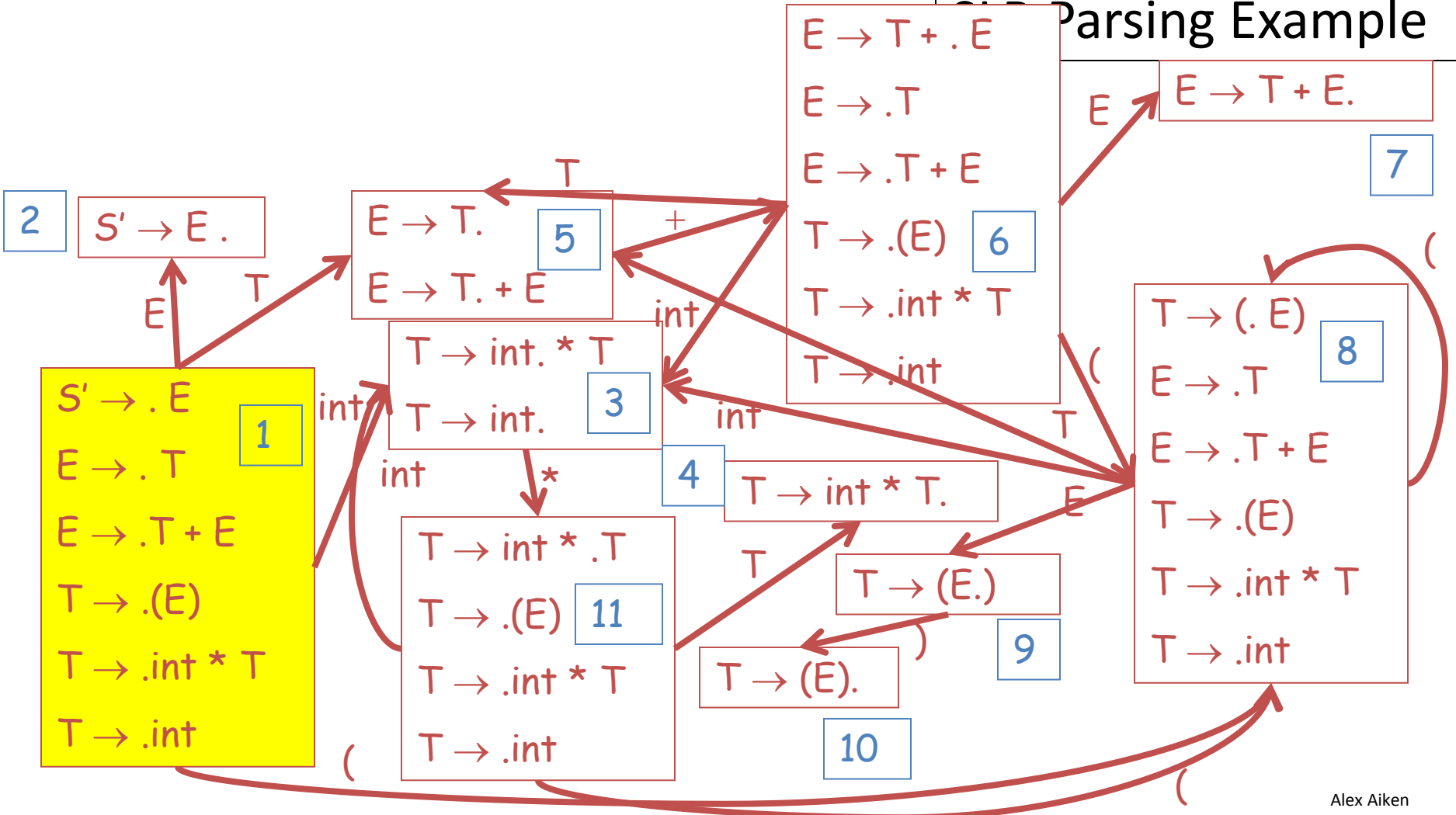
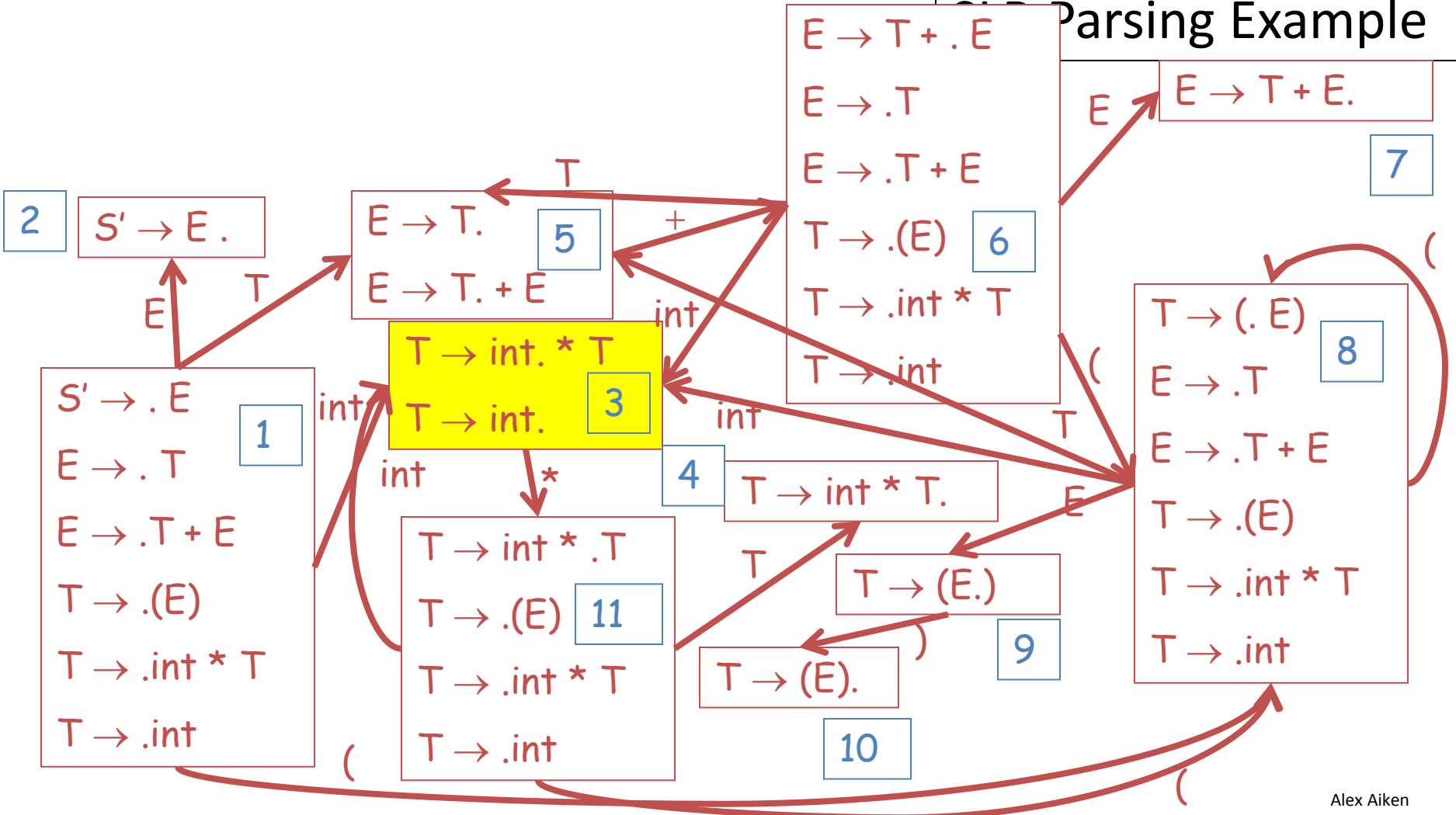
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | 11 | shift |
| int * int \|$ | 3 $ ∈ Follow(T) | red. T→int |
| int * T \|$ | | |

# Parsing Example



# Parsing Example

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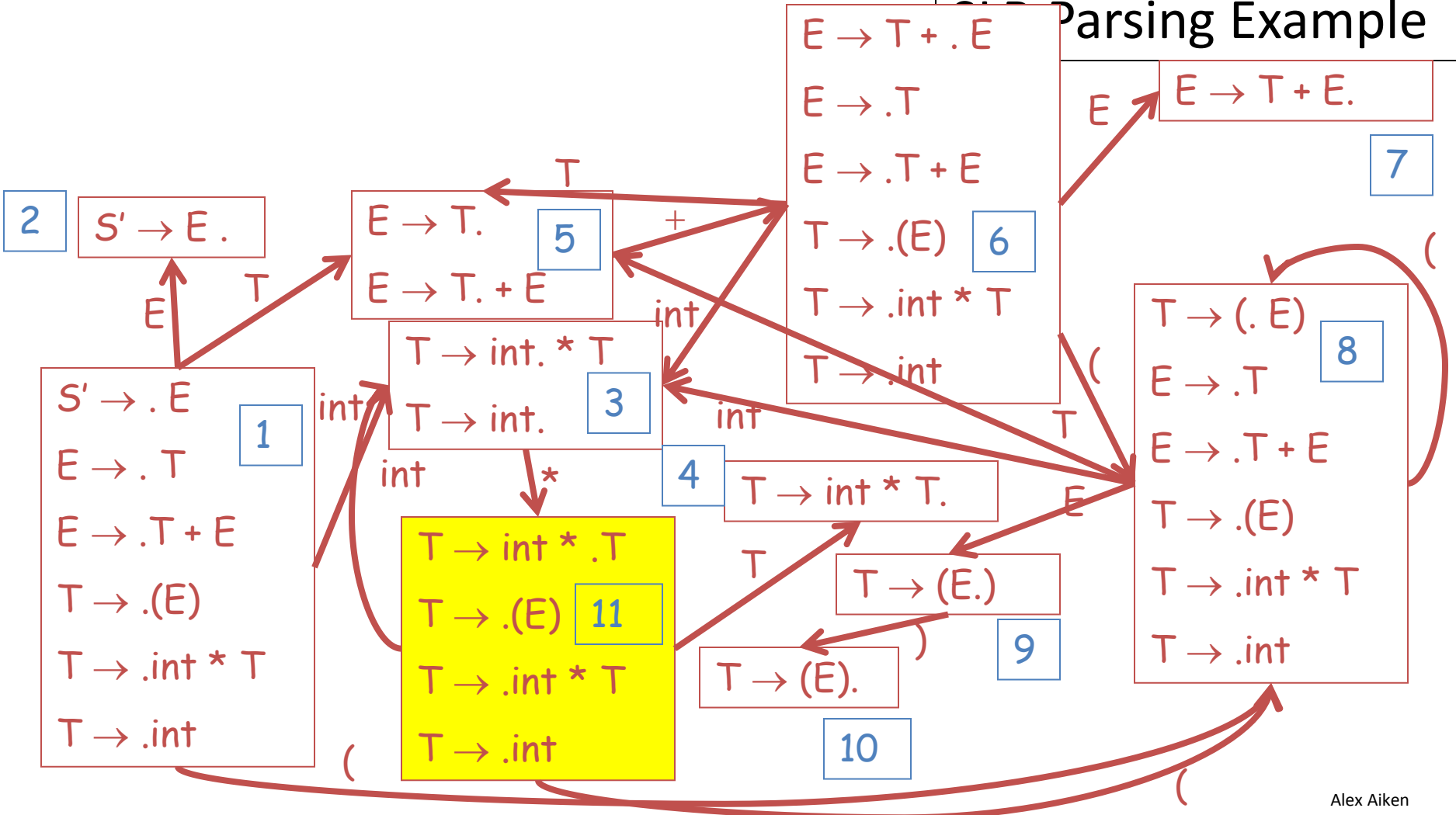
# Parsing Example

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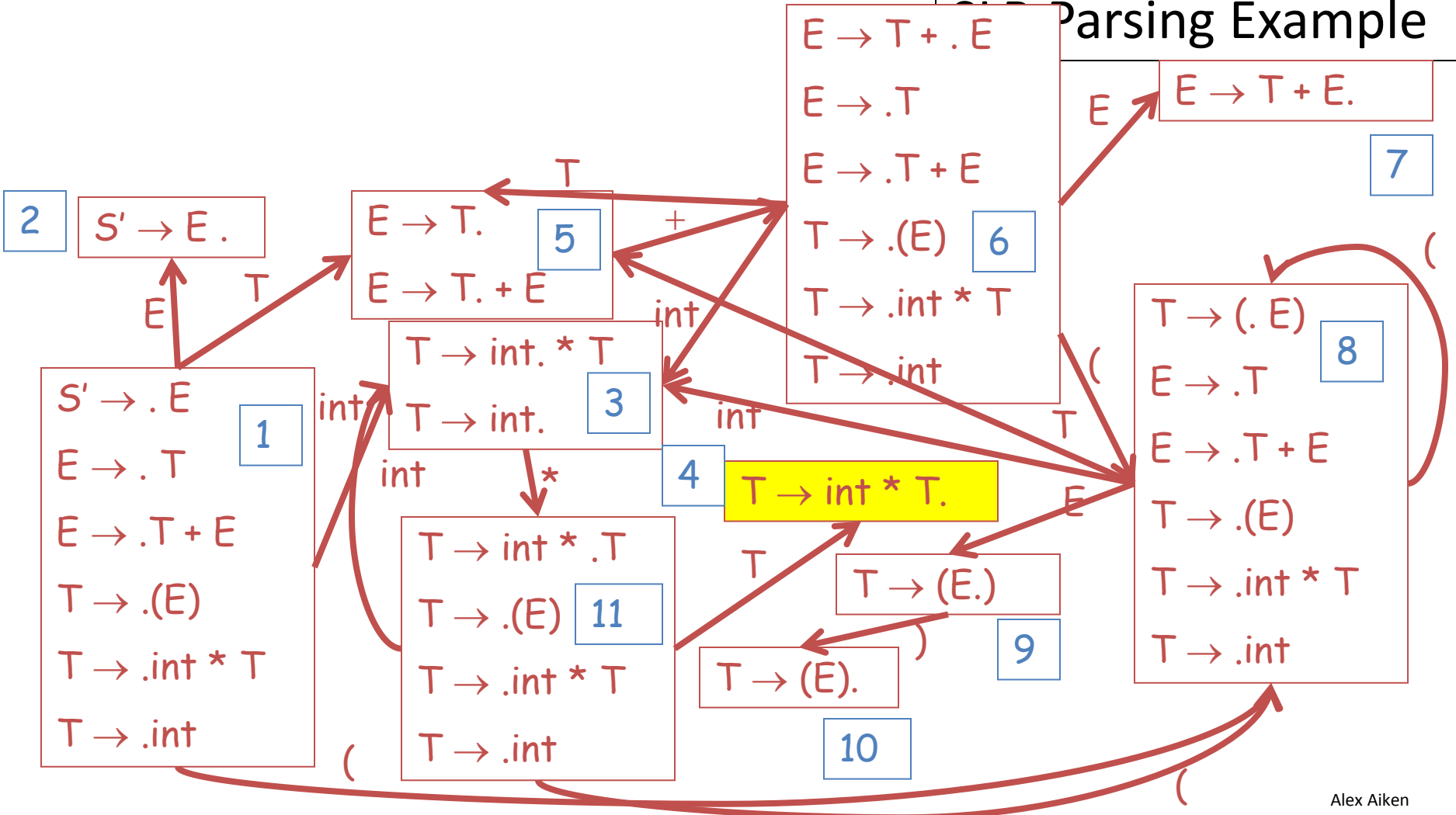
# Parsing Example

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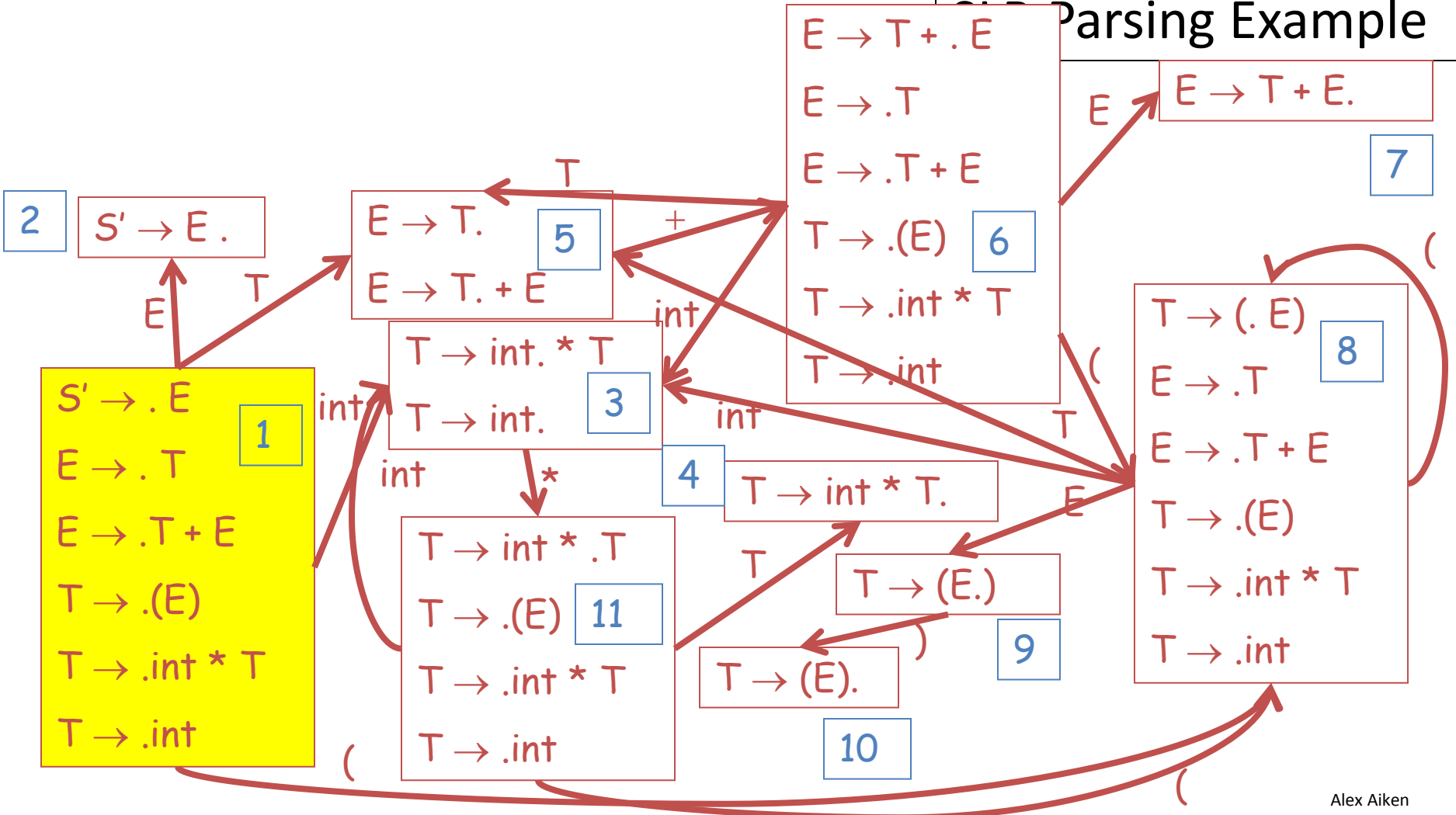
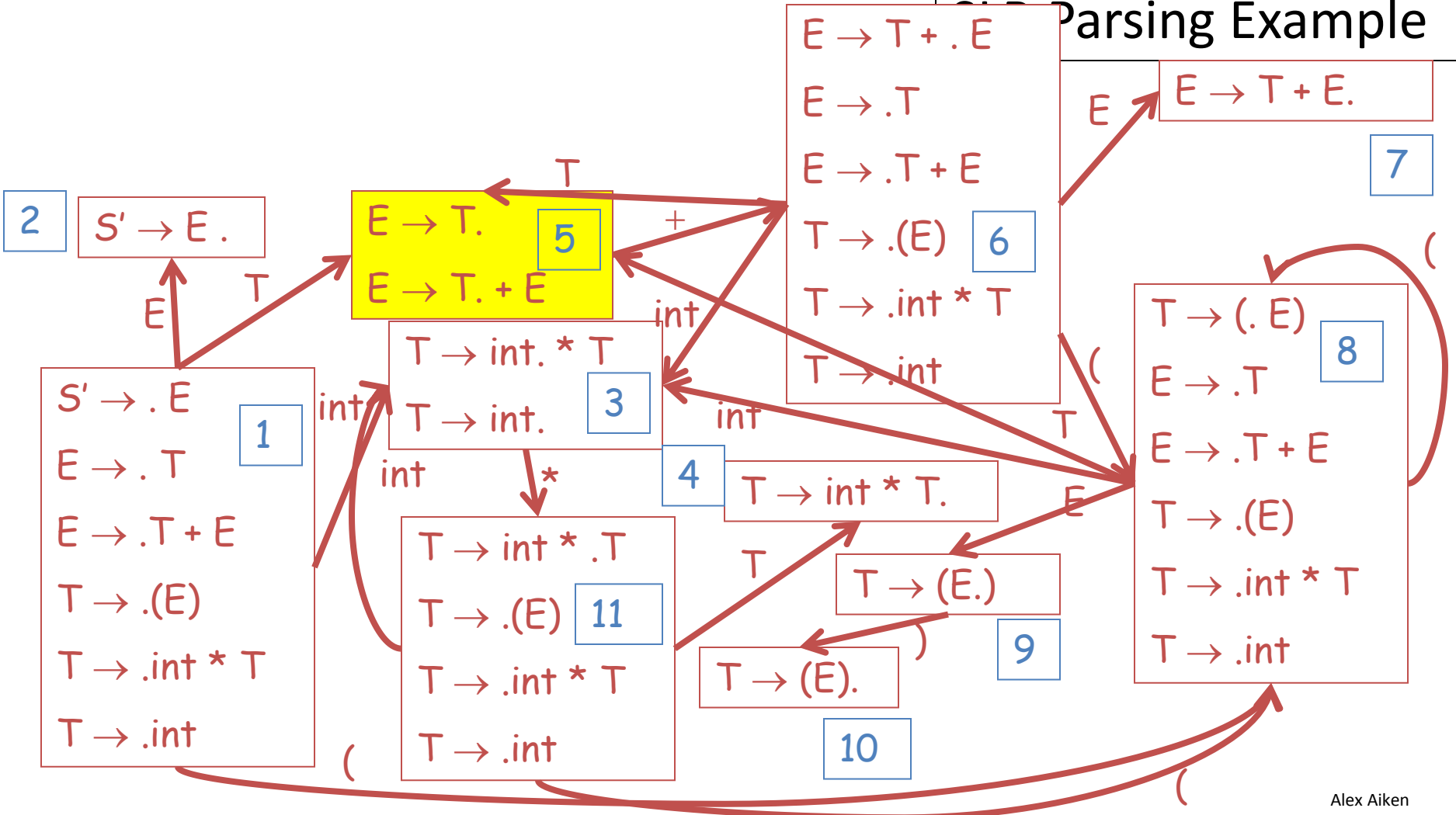
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | 11 | shift |
| int * int \|$ | 3 $ ∈ Follow(T) | red. T→int |
| int * T \|$ | 4 $ ∈ Follow(T) | red. T→int*T |
| T \|$ | | |

# Parsing Example



# Parsing Example

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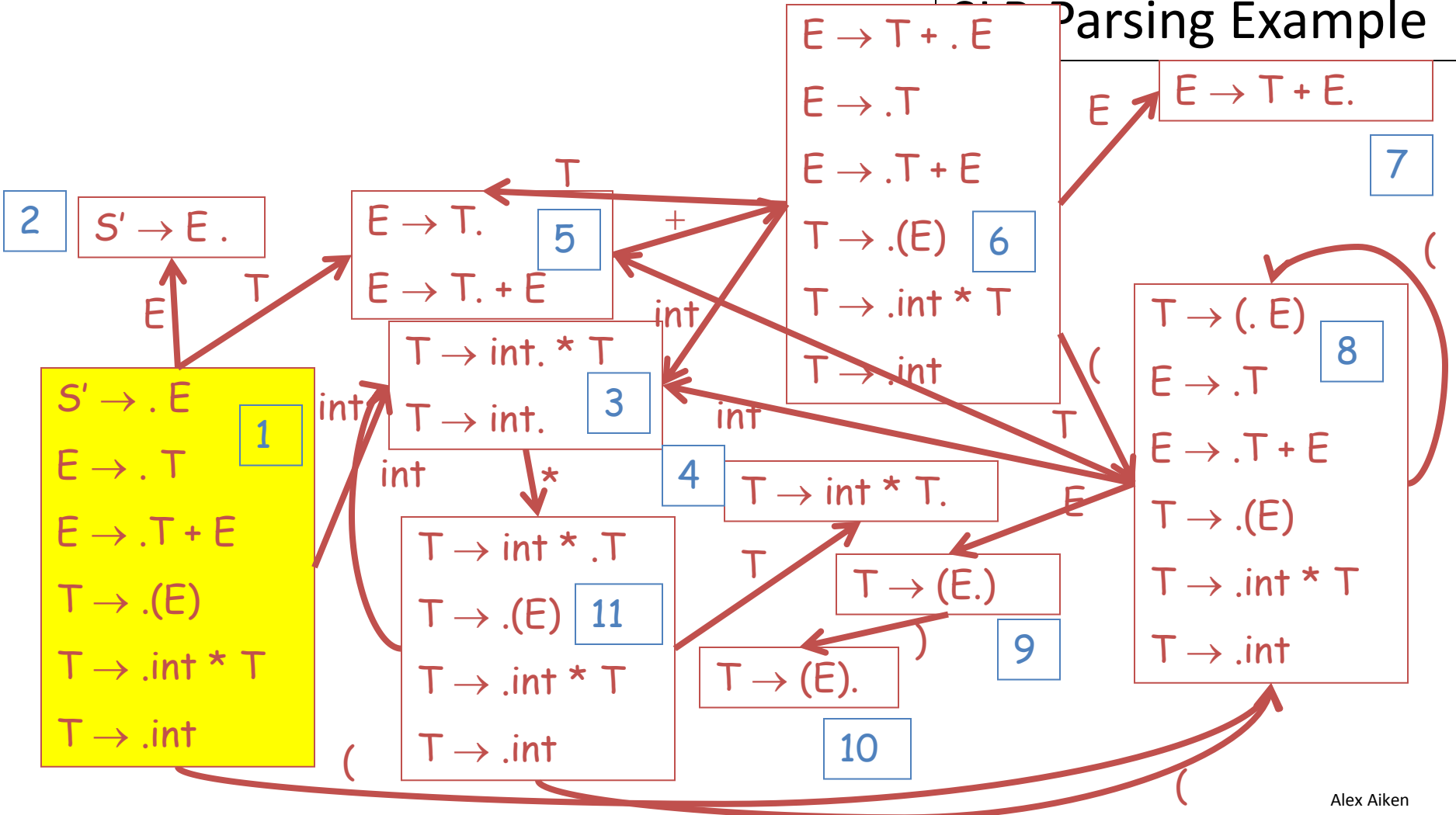
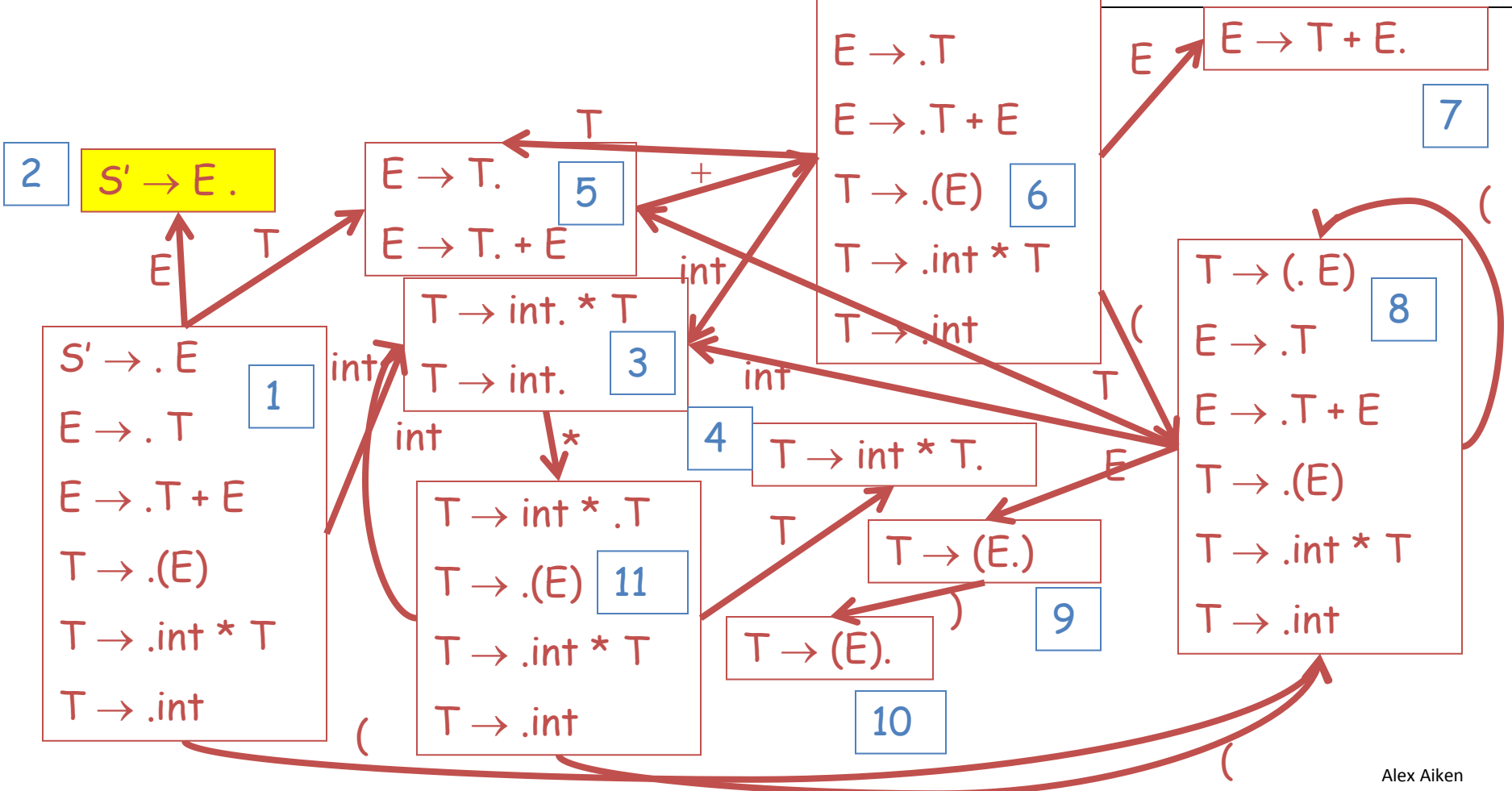
# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | 11 | shift |
| int * int \|$ | 3 $ ∈ Follow(T) | red. T→int |
| int * T \|$ | 4 $ ∈ Follow(T) | red. T→int*T |
| T \|$ | 5 $ ∈ Follow(E) | red. E→T |
| E \|$ | | |

# Parsing Example



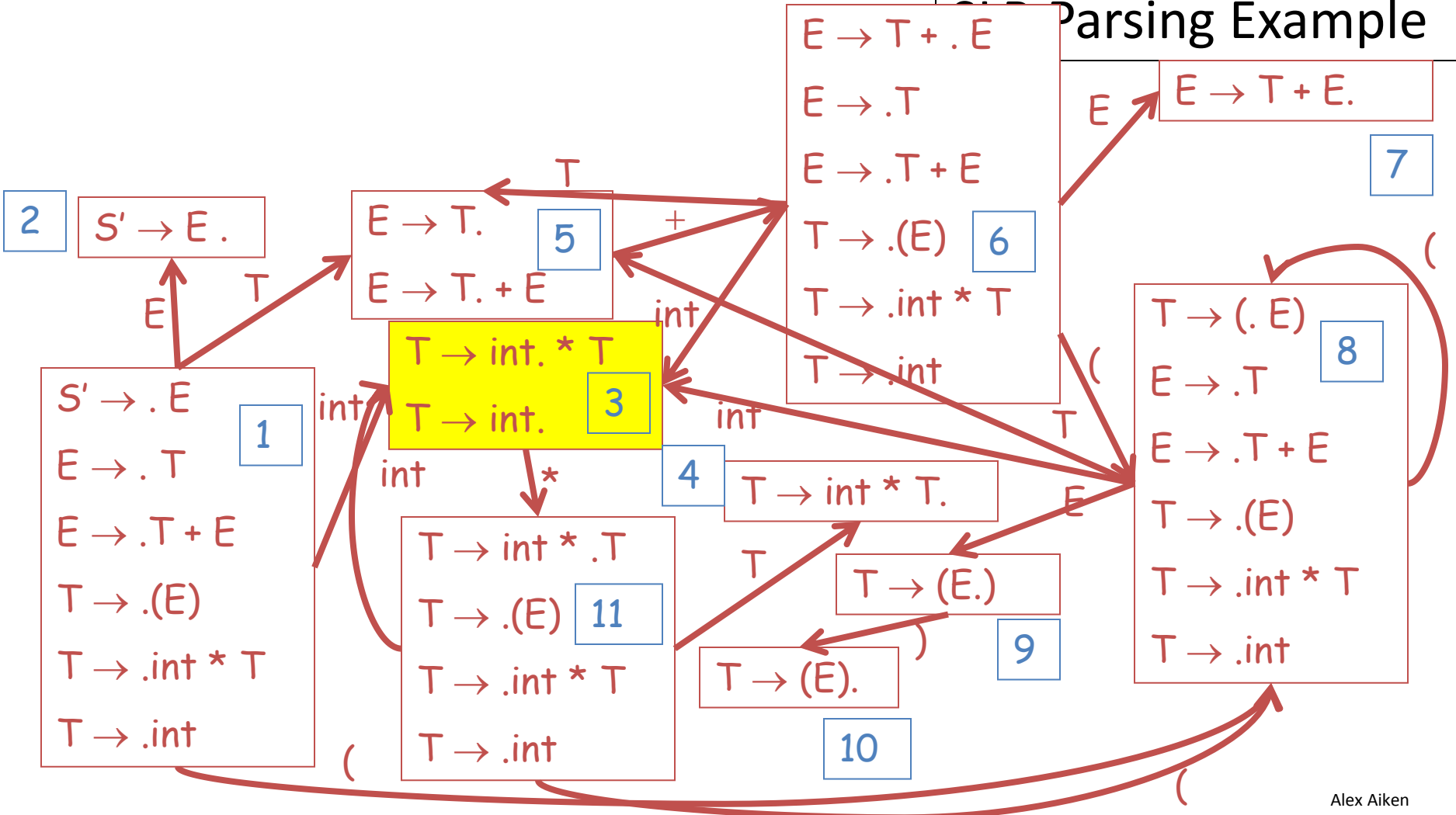
# Parsing Example



# SLR Parsing Example

| *Configuration* | *DFA Halt State* | *Action* |
|---|---|---|
| \|int * int$ | 1 | shift |
| int \| * int$ | 3 * not in Follow(T) | shift |
| int * \| int$ | 11 | shift |
| int * int \|$ | 3 $ ∈ Follow(T) | red. T→int |
| int * T \|$ | 4 $ ∈ Follow(T) | red. T→int*T |
| T \|$ | 5 $ ∈ Follow(T) | red. E→T |
| E \|$ | | accept |

# Parsing Example

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# SLR Parsing Example

Using the DFA on the previous slide, choose the next action for the given parse state

| *Configuration* | *DFA Halt State* |
|---|---|
| int * int\|+ int $ | 3 |

- ○ shift
- ○ red. T → int
- ○ red. T → int * T
- ○ accept

To show the automaton, click "Hide Question"

↓