

$$\psi = (\neg v_0 \rightarrow \neg v_1) \wedge (v_0 \rightarrow \neg v_2)$$

1. 0 duces in FNC

$$\sim (v_0 \vee \neg v_1) \wedge (\neg v_0 \vee \neg v_2) \leftarrow \begin{cases} e(v_0) = 1 \Rightarrow e^+(\neg v_0) = 0 \\ \Rightarrow e^+(\neg v_2) = 1 \\ \Leftrightarrow \neg e^+(v_2) = 1 \\ \Leftrightarrow e(v_2) = 0 \end{cases}$$

$$\Rightarrow S = \left\{ \{v_0, \neg v_1\}, \{\neg v_0, \neg v_2\} \right\}$$

1. Nealgen $x_1 = v_0$

$$T_1^1 = \left\{ \{v_0, \neg v_1\} \right\} \quad T_1^0 = \left\{ \{\neg v_0, \neg v_2\} \right\}$$

$$U_1 = \left\{ \{\neg v_1, \neg v_2\} \right\}$$

$$e: V \rightarrow \{0, 1\},$$

$$\boxed{\begin{matrix} e(v_0) = 1 \\ e(v_2) = 0 \end{matrix}} \leftarrow$$

①

$$S_2' = \left\{ S_1 \setminus \left\{ \overset{\downarrow \gamma v_1}{T_1^1} \cup \overset{\downarrow \gamma v_2}{T_1^0} \right\} \right\} \cup U_1$$

$$S_2' = \left\{ \left\{ \gamma v_1, \gamma v_2 \right\} \right\}$$

$$S_2 = S_2' \setminus \left\{ C \mid C \text{ e trivială} \right\} = \left\{ \left\{ \gamma v_1, \gamma v_2 \right\} \right\}$$

$$\left| \begin{array}{cc} T_1^1(\Box, \odot) & T_1^0(\ast, \odot) \\ \{(\Box \ast), (\Box \odot), \\ (\odot, \ast), (\odot \odot)\} = U. \end{array} \right|$$

$$2. X_2 = v_2 \parallel L = v_2 \mid L^c = \gamma v_2$$

$$T_2^1 = \emptyset \quad T_2^0 = \left\{ \left\{ \gamma v_1, \gamma v_2 \right\} \right\}$$

$$U_2 = \emptyset$$

$$\left| \begin{array}{l} \Rightarrow S_3^1 = \emptyset \cup U_2 = \emptyset \\ S_3 = \emptyset \Rightarrow \text{e satisfiabilă} \end{array} \right|$$

$$\psi = \left(\overbrace{(v_0 \leftrightarrow \neg v_2) \wedge v_1}^A \rightarrow \overbrace{(\neg v_0 \wedge v_1)}^B \right) \quad \Bigg| \begin{array}{l} \text{FNC} \\ \hline (\neg v_0 \vee \neg v_1 \vee v_2) \end{array}$$

v_0	v_1	v_2	$v_0 \leftrightarrow \neg v_2$	A	$\neg v_0 \wedge v_1$	$A \rightarrow B$
0	0	0	0	0	0	1
0	0	1	1	0	0	1
0	1	0	0	0	1	1
0	1	1	1	1	1	1
1	0	0	1	0	0	1
1	0	1	0	0	0	1
1	1	0	1	1	0	0
1	1	1	0	0	0	1

v_0	v_1	v_2	R
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

$$D_1 = v_0 \vee v_1 \vee v_2$$

$$D_2 = v_0 \vee v_1 \vee \neg v_2$$

$$D_3 = \neg v_0 \vee v_1 \vee v_2$$

$$D_4 = \neg v_0 \vee \neg v_1 \vee \neg v_2$$

$$FNC = (v_0 \vee v_1 \vee v_2) \wedge (\dots)$$

$$S = \{ \{ \underline{v_0}, v_1, v_2 \}, \{ \neg v_0, v_1, v_2 \}, \{ \underline{v_0}, v_1, \neg v_2 \}, \{ \neg v_0, \neg v_1, \neg v_2 \} \}$$

$$1. X_1 = v_0 \quad | \quad \underline{T_1^1} = \{ \{ \cancel{v_0}, v_1, v_2 \}, \{ \cancel{v_0}, v_1, \neg v_2 \} \} \quad | \quad T_1^0 = \{ \{ \neg \cancel{v_0}, v_1, v_2 \}, \{ \neg \cancel{v_0}, \neg v_1, \neg v_2 \} \}$$

$$R_{11} = \{ v_1, v_2 \}; \quad R_{12} = \{ v_1, \neg v_1, v_2, \neg v_2 \}$$

$$R_{21} = \{ v_1, \neg v_2, v_2 \}; \quad R_{22} = \{ v_1, \neg v_1, \neg v_2 \}$$

$$U_1 = \{ R_{11}, R_{12}, R_{21}, R_{22} \}$$

$$S_2' = S_1 \setminus (T_1^1 \cup T_1^0) \cup U_1 = U_1$$

$$S_2 = S_1 - \text{triviale} = \{ \{ v_1, v_2 \} \}$$

$$S_2 = \{\{v_1, v_2\}\}$$

$$X_2 = v_1 \mid T_2' = \{\{v_1, v_2\}\} \quad T_2^0 = \emptyset$$

$$\Rightarrow U_2 = \emptyset$$

$$\Rightarrow S_3' = \underbrace{(S_2 - T_2' \cup T_2^0)}_{\emptyset} \cup U_2 = \emptyset \Rightarrow S_3 = \emptyset$$

$$\underbrace{\emptyset}_{\emptyset}$$

\Rightarrow e satisfiabilă

Avem alt S_2 .

$$S_2 = \{ \{v_1\}, \{v_1\}, \{\neg v_1, v_2\} \}.$$

$$x_2 = v_1 \quad T_1' = \{ \{v_1\} \} \mid T_1'' = \{ \{v_1\}, \{\neg v_1, v_2\} \}$$

$$U_2 = \{ \Box, \{v_2\} \}$$

$$S_3' = \{ \Box, \{v_2\} \} \rightarrow S_3 = \{ \Box, \{v_2\} \}$$

$\Rightarrow S_3 = \text{nesatisfiabilă}$

$$\phi = ((v_0 \rightarrow \neg v_1) \rightarrow v_2) \wedge (v_1 \rightarrow \neg v_2) \quad \Bigg| \quad \phi \rightarrow \psi \equiv \neg \phi \vee \psi$$

$$\sim \underbrace{((\neg v_0 \vee \neg v_1) \vee v_2)}_A \wedge (\neg v_1 \vee \neg v_2)$$

$$A \sim ((v_0 \wedge v_1) \vee v_2) \sim (v_0 \vee v_2) \wedge (v_1 \vee v_2)$$

$$\phi \sim (v_0 \vee v_2) \wedge (v_1 \vee v_2) \wedge (\neg v_1 \vee \neg v_2)$$

$$S = \{ \{v_0, v_2\}, \{v_1, v_2\}, \{\neg v_1, \neg v_2\} \}$$

$$\underline{1} \quad x_1 = v_0$$

$$T_1' = \{ \{v_0, v_2\} \} \mid \Rightarrow U_1 = \emptyset$$

$$T_1^0 = \emptyset$$

$$\Rightarrow S_2' = \{ \{v_1, v_2\}, \{\neg v_1, \neg v_2\} \}$$

$$S_2 = S_2'$$

$$\Rightarrow S_3' = (S_2 \setminus (T_2' \cup T_2^0)) \cup U_2$$

$$S_3' = \{ \{v_2, \neg v_2\} \}$$

$$S_3 = \emptyset \Rightarrow \text{e satisfiabilă}$$

$$S_i' = (S_{i-1} \setminus (T_i' \cup T_i^0)) \cup U_i$$

$$S_i = S_i' \text{ fără triviale}$$

$$x_2 = v_1 \mid$$

$$T_2' = \{ \{v_1, v_2\} \}$$

$$T_2^0 = \{ \{\neg v_1, \neg v_2\} \}$$

$$\Rightarrow U_2 = \{ \{v_2, \neg v_2\} \}$$