A nondeterministic automaton $A = (S, X, \delta)$ consists of the following data: (1) $S$ is a set of states. (2) $X$ is an alphabet. (3) $\delta$ is a relation such that $\delta(s, a) \subseteq S$ for any $s \in S$ and any $a \in X \cup \{\epsilon\}$.

We will deal with nondeterministic directable automata and their related languages. For nondeterministic automata, the directability can be defined in several ways.

Let $A = (S, X, \delta)$ be a nondeterministic automaton. In the following definition, $Sw^A$ denotes $\bigcup_{s \in S} sw^A$ for $w \in X^*$.

**Definition** (1) A word $w \in X^*$ is $D_1$-directing if $Sw^A \neq \emptyset$ for any $s \in S$ and $|Sw^A| = 1$. (2) A word $w \in X^*$ is $D_2$-directing if $Sw^A = Sw^A$ for any $s \in S$. (3) A word $w \in X^*$ is $D_3$-directing if $\bigcap_{s \in S} sw^A \neq \emptyset$.

In the talk, the new results on the shortest directing words will be presented.