Experiments

April 27, 2018

Table 1: Proportions of Interleaving with Different Occurrence Types

Index	Abbr.	Percentage	Explanation
1	$\&(a^b)$	93.07%	Interleaving cannot contain concatenation, disjunction or interleaving
2	&(.)	0.09%	Interleaving contains concatenation
3	&(|)	1.70%	Interleaving contains disjunction
4	.(&)	0.18%	Concatenation contains interleaving
5	|(&)	1.41%	Disjunction contains interleaving
6	&(&)	0.23%	Interleaving contains interleaving
7	&(|.)	3.19%	Interleaving contains disjunction and concatenation
8	others	0.13%	other occurrence types

Table 2: Results of Inference Using Different Methods on **example1**

Sample Size	**From**	**Element Name**	ND	$\|RE\|$	CC
77624	Constructed Data	example1			
Method	**Regular Expression**				
IntelliJ IDEA	$(a_1\|a_2\|a_3\|a_4)^+\|(a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12})^+$		1	29	——
Liquid Studio	$(a_1\|a_2\|a_3\|a_4\|a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12})^+$		1	26	——
Altova XMLSpy	$a_7a_5a_8^+\|a_4a_1\|a_5(a_{12}a_7a_9\|a_{11}^+(a_8^+\|a_7^+(a_9\|a_{11})^?a_8^+)\|a_9(a_8a_7\|a_7a_8^?)^?\|a_8^+(a_9a_7^?\|a_7^+(a_6^?a_9)^?\|a_6a_9)^?\|a_7^+(a_{10}^+\|a_{11}a_8^+\|a_9^+(a_{10}^+\|a_8a_{10}^*)^?\|a_8^+(a_7\|(a_6\|a_{10}^+)a_9\|a_{11}a_8\|a_9a_{10}^*)^?\|a_6a_8^?a_9)^?\|a_6(a_9(a_7\|a_8)^?\|a_8^+(a_9\|a_7^+a_9^?)^?\|a_7^+(a_9a_8^*\|a_8^+a_9^?)))^?\|a_1(a_4a_2^?\|a_3(a_2a_4^?)^?\|a_2(a_4\|a_3a_4^?)^?)^?$		4	218	——
Trang	$(a_1\|a_2\|a_3\|a_4)^+\|(a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12})^+$		1	29	——
InstanceToSchema	$a_1^?\&a_2^?\&a_3^?\&a_4^?\&a_5^?\&a_6^?\&a_7^*\&a_8^*\&a_9^*\&a_{10}^*\&a_{11}^*\&a_{12}^?$		1	35	479001600
Soa2Chare	$(a_1\|a_2\|a_3\|a_4)^*(a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12})^*$		1	29	——
GenEchare	$(a_1\|a_2\|a_3\|a_4)^*(a_5\|a_6\|a_7^+\|a_8^+\|a_9^+\|a_{10}^+\|a_{11}^+\|a_{12})^*$		1	34	——
learn$_{DME}{}^+$	$(a_{12}^?\|a_8^*\|a_4^?)\&(a_6^?\|a_2^?\|a_{11}^*)\&(a_3^?\|a_5^?)\&a_9^*\&a_7^*\&a_{10}^*\&a_1^?$		1	41	30240
conMiner	$a_1^?a_2^?a_5^?a_6^?a_{11}^*a_9^*\&a_7^*a_{10}^*a_3^?a_4^?\&a_{12}^?a_8^*$		1	35	13860
GenESIRE	$a_3^?a_4^?\&a_1a_2^?\|(a_8^*\|a_{12}^?)\&a_5(a_{11}^*\|a_6)a_9^*\&a_7^*a_{10}^*$		1	40	246

Table 3: Results of Inference Using Different Methods on **www**

Sample Size	**From**	**Element Name**	ND	$\|RE\|$	CC
2000226	DBLP	www			
Method	**Regular Expression**				
Original Schema	$(a_1\|a_2\|a_3\|a_4\|a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12}\|a_{13}\|a_{14}\|a_{15}\|a_{16}\|a_{17}\|a_{18}\|a_{19}\|a_{20}\|a_{21}\|a_{22}\|a_{23})^*$		1	48	——
IntelliJ IDEA	$a_{19}^?a_2^*(a_1\|a_4\|a_{16}\|a_{13}\|a_{18}\|a_3\|a_{12}\|a_6)^*$		1	24	——
Liquid Studio	$(a_1\|a_3\|a_{12}^+\|a_{18}^+\|a_{16}\|a_2\|a_6\|a_{13}\|a_4\|a_{19})^+$		2	24	——
Altova XMLSpy	$a_{19}\|a_3(a_6^?a_{12}\|a_1^+a_{12}^+a_{18}^+)\|a_2^+a_3(a_6a_{12}\|a_{13}a_6)\|a_1^+(a_{12}^+(a_3a_{18}^?\|a_{18}^+a_3)\|a_3(a4^?a_6a_{12}\|a_{12}^+(a_6\|a_{18}^+(a_{12}^+\|a_{16}^+a_{12}^*)^?\|a_{16}^+a_{18}^*)^?\|a_{18}^+(a_{12}^+((a_{16}^+\|a_{18}^+)a_{12}^*)^?\|a_{16}^+a_{12}^?)^?\|a_{16}a_{12}^*)^?\|a_{18}^+(a_{12}^+a_3\|a_3(a_{12}^+(a_{18}^+a_{12}^?\|a_{16}a_{12})^?\|a_{18}a_{12}^*)^?))$		5	165	——
Trang	$a_2^*(a_{19}\|(a_1\|a_4\|a_{16}\|a_{13}\|a_{18}\|a_3\|a_{12}\|a_6)^+)$		1	25	——
InstanceToSchema	$a_{13}^?\&a_{18}^*\&a_2^*\&a_6^?\&a_1^*\&a_{16}^*\&a_3^?\&a_4^?\&a_{19}^?\&a_{12}^*$		1	29	$3.63 * 10^6$
Soa2Chare	$(a_2^+\|a_{19})^?(a_{13}\|a_{16}\|a_6\|a_1\|a_{12}\|a_{18}\|a_3\|a_4)^*$		2	26	——
GenEchare	$(a_2^+\|a_{19})^?(a_{13}\|a_{16}^+\|a_6\|a_1^+\|a_{12}^+\|a_{18}^+\|a_3\|a_4)^*$		2	30	——
learn$_{DME}{}^+$	$(a_{18}^*\|a_6^?\|a_{19}^?)\&(a_{16}^*\|a_4^?\|a_{13}^?)\&(a_1^*\|a_2^*)\&a_3^*\&a_{12}^*$		1	35	$2.16 * 10^3$
conMiner	$a_{19}^?a_2^*a_3^*a_{16}^*a_4^?a_{13}^?a_6^?\&a_{12}^*\&a_1^*a_{18}^*$		1	29	$3.60 * 10^2$
GenESIRE	$(a_2^*\|a_{19}^?)(a_{18}^*\&a_3(a_{16}^*\|a_{13}^?\|a_4^?)a_6^?\&a_1^*a_{12}^*)^?$		2	35	$3.60 * 10^2$

Table 4: Results of Inference Using Different Methods on **article**

Sample Size	**From**	**Element Name**	ND	$\|RE\|$	CC
1737265	DBLP	article			
Method	**Regular Expression**				
Original Schema	$(a_1\|a_2\|a_3\|a_4\|a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12}\|a_{13}$ $\|a_{14}\|a_{15}\|a_{16}\|a_{17}\|a_{18}\|a_{19}\|a_{20}\|a_{21}\|a_{22}\|a_{23})^*$		1	48	——
IntelliJ IDEA	$a_2^*(a_1\|a_4\|a_{14}\|a_{15}\|a_{18}\|a_{13}\|a_8\|a_{11}\|a_{17}\|a_{10}\|a_5\|a_{16}\|a_3\|a_{12}\|a_9\|a_6)^+$		1	37	——
Liquid Studio	$(a_{13}\|a_1^+\|a_3\|a_5\|a_{14}\|a_6\|a_9\|a_8\|a_{10}\|a_{12}\|a_{15}^+\|a_{17}\|a_{11}\|a_{16}\|a_{18}\|a_4\|a_2)^+$		2	38	——
Altova XMLSpy	$a_3((a_{13}a_6a_8a_9\|a_{14}a_6a_9a_8a_{10})a_{12}\|a_6((a_5a_8a_9a_{11}a_{13}\|a_8a_{13}a_9)a_{12}\|a_9a_8$ $(a_{12}\|a_{10}(a_{12}((a_{14}\|a_{13})a_5^?\|a_5a_{14}^?)^?\|a_5(a_{12}a_{13}\|a_{13}a_{12})\|a_{13}^+a_{12}a_5^?)\|a_{13}^+a_{12}$ $a_5^?))\|a_5(a_6(a_9(a_{10}a_8a_{13}^*a_{12}\|a_8(a_{12}(a_{13}a_{15}^?)^?\|a_{10}(a_{12}(a_{14}\|a_{17}\|a_{13}^+a_{17}^?)^?$ $\|a_{13}^+a_{12}a_{15}^?\|a_{14}a_{12})\|a_{13}(a_{12}a_{15}^?\|a_{18}a_{12}))))\|a_{10}a_9a_8a_{13}^?a_{12}\|a_{13}a_9a_8a_{10}$ $a_{12})\|a_{13}^+a_6a_9a_8a_{10}^?a_{12}a_{15}^?\|a_{14}a_6a_9a_8a_{10}a_{12}a_{13}^?)\|a_8a_9(a_6\|a_{16}a_6a_{17}\|a_{10}$ $a_6a_{13}a_{12})\|a_1^+a_5a_8a_{11}a_6a_9a_{10}(a_{12}(a_{13}a_{14}^?)^?\|a_{13}a_{12}))^?\|a_{17}a_3a_5a_6a_9a_8$ $a_{10}a_{13}a_{12}\|a_{13}(a_3(a_5(a_6a_9a_8a_{10}a_{12}a_{14}\|a_{14}a_6a_9a_8a_{10}a_{12})\|a_1^+a_6a_8a_9a_{12}$ $)\|a_{14}a_1^?a_3a_5a_6a_9a_8a_{10}a_{12}\|a_1^+a_3(a_6a_9a_8a_{12}\|a_5(a_6(a_9a_8a_{10}a_{12}(a_{14}\|a_{15}^+$ $)^?\|a_{14}a_9a_8a_{10}a_{12})\|a_{14}a_6a_9a_8a_{10}a_{12}a_{15}^*))\|a_2^+a_3((a_5a_6a_9a_8a_{10}a_{13}^+\|a_{13}$ $a_6a_8a_9)a_{12}\|a_8a_9a_6(a_{13}\|a_{16}))\|a_{14}(a_3a_5a_6a_9a_8a_{10}a_{12}a_{13}\|a_1a_3(a_6a_9a_8$ $a_{10}a_5a_{12}a_{13}^?\|a_5a_6a_9a_8a_{10}a_{12}a_{13}))\|a_1^+a_3(a_{16}a_8a_9a_{11}a_6a_{17}\|a_{14}a_5a_6a_9$ $a_8a_{10}a_{12}a_{13}a_{15}^+\|a_6(a_9(a_5a_8(a_{12}a_{13}\|a_{13}a_{12}\|a_{10}(a_{12}a_{13}\|a_{13}a_{12}))\|a_{10}(a_5$ $a_8a_{13}a_{12}\|a_8(a_{12}(a_{13}a_{14}^?)^?\|a_{13}^+a_{12}a_5^?\|a_{14}a_{12}))\|a_{17}a_8a_{13}a_{12}\|a_8(a_{12}(a_5$ $(a_{13}\|a_{10})^?\|a_{13}(a_5\|a_{15}^+a_{17}^{*?})^?\|a_5(a_{10}^?a_{13}a_{12}\|a_{12}a_{13})\|a_{10}(a_{12}(a_5(a_{13}\|a_{14}$ $a_{13}^?)^?\|a_{13}(a_{17}\|a_5)^?)^?\|a_5((a_{14}\|a_{13}^+)a_{12}\|a_{12}(a_{14}\|a_{13})^?)\|a_{13}^+(a_{12}a_5^?\|a_5a_{12}$ $))\|a_{13}^+(a_{12}(a_{17}\|a_5)^?\|a_{10}a_{12})))\|a_5(a_9a_8a_{10}\|a_8a_9a_{11})a_{13}a_{12}\|a_{17}a_{13}\|a_8($ $a_9(a_{10}^?a_{13}^+a_{12}\|a_{11}a_{13}^?a_{12})\|a_{13}^+a_9a_{10}^?a_{12})\|a_{13}a_9a_8(a_{12}\|a_{10}(a_{12}a_5^?\|a_5a_{12}$ $))))\|a_5(a_6(a_9(a_{10}((a_{13}\|a_{11}a_{14})a_8a_{12}\|a_8(a_{12}(a_{13}^+a_{17}^?)^?\|a_{13}^+a_{12}))\|a_8(a_{12}($ $a_{17}\|a_{10}a_{13}\|a_{13}^+a_{17}^?)^?\|a_{10}(a_{12}((a_{15}^+\|a_{17})a_{13}^*\|a_{13}^+(a_{15}^+\|a_{17}\|a_{14}a_{15}^*)^?\|a_{14}(a_{15}^+$ $\|a_{13}a_{15}^*)^?)^?\|a_{17}a_{12}\|a_{13}^+(a_{12}(a_{15}^+\|a_{17}\|a_{14}a_{15}^*)^?\|a_{17}a_{12}\|a_{14}a_{12}a_{15}^*)\|a_{14}(a_{12}$ $(a_{13}a_{15}^*\|a_{15}^+a_{13})\|a_{13}a_{12}a_{15}^+))\|a_{13}^+(a_{18}\|a_{10})^?a_{12}\|a_{14}a_{13}^?a_{10}a_{12}a_{15}^+)\|a_{13}a_8$ $a_{10}^?a_{12}\|a_{14}a_8a_{10}a_{12}a_{13}a_{15}^+)\|a_{10}((a_9a_8\|a_8a_9)a_{13}a_{12}\|a_{12}a_9a_8)\|a_8(a_9a_{13}$ $a_{12}\|a_{10}(a_9^?a_{13}a_{12}\|a_{12}a_9))\|a_{13}^+a_9a_8(a_{12}\|a_{10}a_{12}(a_{15}^+\|a_{17})^?)\|a_{18}((a_4\|a_8a_9)$ $a_{13}a_{12}\|a_9a_8a_{10}^?a_{13}a_{12})\|a_{14}a_9a_8a_{10}a_{12}a_{13}a_{15}^+\|a_4a_{13}a_{12}a_{18}^?)\|a_9a_6a_8(a_{10}$ $a_{12}a_{13}\|a_{13}a_{12})\|a_8a_{11}a_6a_9a_{10}a_{12}a_{13}\|a_{13}^+a_6(a_9a_8(a_{12}a_{18}^?\|a_{10}a_{12}a_{17}^?)\|a_{18}$ $(a_4\|a_8a_9)a_{12})\|a_{14}a_6a_9a_8a_{10}(a_{12}(a_{15}^+\|a_{13}^+a_{15}^*)^?\|a_{13}^+(a_{12}a_{15}^*\|a_{15}^+a_{12}))))\|a_8$ $(a_6(a_9a_{10}a_{12}a_{13}\|a_{12}(a_{13}a_{10})^?\|a_{10}(a_9a_{12}a_{13}^?\|a_{12}a_9^?a_{13}))\|a_9(a_{12}a_6\|a_5a_6$ $a_{13}\|a_6(a_{11}^?a_{17}\|a_{12}a_{14}^?\|a_{16}(a_{13}a_{17})^?\|a_5a_{12}(a_{13}a_{17}^?)^?)^?\|a_{10}a_6(a_{12}a_{13}\|a_5$ $(a_{12}(a_{13}\|a_{17})^?\|a_{13}a_{12}(a_{15}^+\|a_{17})^?\|a_{14}a_{12}a_{13}a_{15}^*))\|a_{11}a_6(a_{17}\|a_{12}(a_{14}\|a_{17}$ $)^?\|a_{14}a_{17}^?)^?)\|a_{11}(a_6(a_9a_{14}^?)^?\|a_9a_6))\|a_{13}^+(a_6(a_9a_8(a_{12}\|a_{10}a_{12}a_5^?)\|a_8a_9($ $(a_{17}\|a_{10})a_{12}\|a_{12}a_{10}^?)\|a_4a_9a_{12}a_{10})\|a_9a_6a_8a_{12}\|a_5a_6a_9a_8(a_{12}\|a_{10}a_{12}a_{14}^?)))$		4	1581	——
Trang	$a_2^*(a_{19}\|(a_1\|a_4\|a_{16}\|a_{13}\|a_{18}\|a_3\|a_{12}\|a_6)^+)$		1	25	——
Instance ToSchema	$a_{13}^*\&a_{17}^*\&a_2^*\&a_6^?\&a_1^*\&a_3\&a_{14}^?\&a_{12}^?\&a_9^?\&$ $a_{10}^?\&a_5^?\&a_8^?\&a_{11}^?\&a_{15}^*\&a_{16}^?\&a_{18}^?\&a_4^?$		1	49	$3.56 * 10^{14}$
Soa2Chare	$a_2^*(a_6\|a_{13}\|a_3\|a_{14}\|a_{12}\|a_9\|a_{15}\|a_{10}\|a_5\|a_8\|a_{11}\|a_1\|a_{16}\|a_{17}\|a_{18}\|a_4)^+$		1	38	——
GenEchare	$a_2^*(a_6\|a_{13}^+\|a_3\|a_{14}\|a_{12}\|a_9\|a_{15}^+\|a_{10}\|a_5\|a_8\|a_{11}\|a_1^+\|a_{16}\|a_{17}^+\|a_{18}\|a_4)^+$		2	41	——
$\text{learn}_{DME}{}^+$	$(a_{15}^*\|a_{11}^?\|a_{18}^?\|a_2^*)\&(a_{10}^?\|a_{16}^?)\&(a_8^?\|a_4^?)\&a_5^?$ $\&a_{12}^?\&a_{14}^?\&a_1^*\&a_{17}^*\&a_{13}^*\&a_6^?\&a_3\&a_9^?$		1	55	$7.66 * 10^9$
conMiner	$a_4^?a_{11}^?a_{14}^?a_{17}^*\&a_6^?\&a_8^?\&a_3a_{18}^?a_{10}^?a_{16}^?a_{15}^*\&a_{12}^?\&a_9^?\&a_1^*a_5^?\&a_2^*a_{13}^*$		1	49	$3.09 * 10^{10}$
GenESIRE	$a_2^*((a_{18}^?\|a_{14}?)a_{17}^*\&a_8^?\&a_{13}^*\&a_9^?\&a_3a_{11}^?a_{12}^?\&$ $a_1^*(a_{16}^?\|a_4^?)a_{10}^?a_{15}^*\&a_6^?\&a_5^?)$		1	55	$1.21 * 10^9$

Table 5: Results of Inference Using Different Methods on **Entry**

Sample Size	**From**	**Element Name**	ND	$\|RE\|$	CC
50000	SwissPort	Entry			
Method	**Regular Expression**				
IntelliJ IDEA	$(a_1\|a_2\|a_3\|a_4\|a_5\|a_6\|a_7\|a_8\|a_9\|a_{10}\|a_{11}\|a_{12}\|a_{13}\|a_{14}\|a_{15}\|a_{16}\|a_{17}\|a_{18}\|a_{19}\|a_{20}\|a_{21}\|a_{22}\|a_{23}$ $\|a_{24}\|a_{25}\|a_{26}\|a_{27}\|a_{28}\|a_{29}\|a_{30}\|a_{31}\|a_{32}\|a_{33}\|a_{34}\|a_{35}\|a_{36}\|a_{37}\|a_{38}\|a_{39}\|a_{40}\|a_{41}\|a_{42}\|a_{43})^*$	1	88	——
Liquid Studio	$(a_1^+\|a_2^+\|a_3^+\|a_4^+\|a_5^+\|a_6^+\|a_7^+\|a_8^+\|a_9^+\|a_{10}^+\|a_{11}^+\|a_{12}^+\|a_{13}^+\|a_{14}^+\|a_{15}^+\|a_{16}^+\|a_{17}^+\|a_{18}^+\|a_{19}^+\|a_{20}^+\|a_{21}^+\|a_{22}^+\|a_{23}^+$ $\|a_{24}^+\|a_{25}^+\|a_{26}^+\|a_{27}^+\|a_{28}^+\|a_{29}^+\|a_{30}^+\|a_{31}^+\|a_{32}^+\|a_{33}^+\|a_{34}^+\|a_{35}^+\|a_{36}^+\|a_{37}^+\|a_{38}^+\|a_{39}^+\|a_{40}^+\|a_{41}^+\|a_{42}^+\|a_{43}^+)^*$	2	124	——
Altova XMLSpy	$a_1^+a_2^+a_3^+(a_5^+(a_7^+a_8^+((a_{31}\|(a_{36}a_{11}a_{12}a_{18}\|a_{24}a_{22}a_{11})^?a_{15}^+a_{13}^+)^?a_{14}\|a_{19}a_{13}^+\|a_9^+(((a_{23}\|(a_{30}$ $a_{19}a_{11}^+a_{12}\|a_{21}a_{11}^+a_{12}a_{18})^?a_{15}^+)a_{13}^+)^?a_{14}\|a_{36}a_{13}^+\|a_{34}^+a_{11}^+a_{12}a_{18}^*a_{15}^+a_{13}^+a_{14}\|a_{28}(a_{11}^+a_{12}^+($ $a_{18}a_{15}^+)^?a_{13}^+a_{14})^?\|a_{27}^+(a_{13}^+a_{14}^?\|a_{11}^+(a_{15}a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}\|a_{18}^+a_{15}^*a_{13}^+a_{14})))\|a_{25}$ $a_{13}^*a_{14}\|a_{24}((a_{22}a_{11}\|a_{21}a_{11}a_{12}a_{18})a_{15}a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{13}^+a_{14}^?)\|a_{22}^+(a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{15}^*a_{13}^+a_{14})$ $\|a_{19}a_{11}^+a_{12}^+(a_{15}^*a_{13}^+a_{14}\|a_{18}(a_{15}a_{13}^+\|a_{13}^+a_{14}))\|a_{17}^+(a_{13}^+a_{14}\|a_{11}^+a_{12}^+(a_{18}(a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14})\|a_{15}^+a_{13}^+$ $a_{14}^?\|a_{13}^+a_{14}))\|a_{16}^+(((a_{35}\|(a_{28}a_{11}^+a_{12}\|a_{24}a_{11}^+a_{12}a_{18})^?a_{15}^+\|((a_{25}\|a_{30}a_{19})a_{11})^?a_{12}^+)a_{13}^+)^?a_{14}\|a_{43}^+$ $(a_{12}^?a_{13}^+a_{14}\|a_{11}^+a_{12}a_{15}a_{13}^+a_{14}^?)\|a_{36}a_{11}^+(a_{18}a_{15}a_{13}^+\|a_{12}(a_{18}a_{15}a_{13}^+\|a_{15}^+a_{13}^+a_{14}))\|a_{34}^+a_{11}^+a_{12}^+a_{18}^*$ $a_{15}^+a_{13}^+a_{14}\|a_{27}^+(((a_{23}\|a_{34}\|a_{36})a_{11}^+a_{12}a_{18}^+\|a_{17}a_{11}^+a_{12}^+)a_{15}^+a_{13}^+a_{14}\|a_{19}a_{11}^+a_{12}^?a_{18}^+a_{15}^+a_{13}^+a_{14}\|a_{13}^+$ $a_{14}^?\|a_{11}^+((a_{15}^+\|a_{18})a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}^?\|a_{18}^+(a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14}))))\|a_{23}(a_{13}^+a_{14}\|a_{11}a_{12}a_{18}a_{13}^+$ $)\|a_{22}(a_{11}^+a_{12}a_{18}a_{15}^+)^?a_{13}^+a_{14}\|a_{21}(a_{13}^+a_{14}\|a_{11}a_{12}^?a_{15}a_{13}^+a_{14})\|a_{19}(a_{13}^+\|a_{11}^+a_{12}^+(a_{18}^+(a_{15}a_{13}^+a_{13}^?$ $\|a_{13}^+a_{14})\|a_{15}a_{13}^+\|a_{13}^?a_{14}^?))\|a_{17}(a_{11}a_{12}a_{15}^+)^?a_{13}^+a_{14}\|a_{13}^?a_{14}^+\|a_{11}^+(a_{18}^+a_{15}^*a_{13}^+a_{14}\|a_{15}^+a_{13}^+a_{14}^?\|a_{12}^+$ $(a_{14}\|a_{18}^+(a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)\|a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)\|a_{10}((a_{17}\|a_{43}^+)a_{11}^+a_{12}^+a_{18}^?a_{15}^+$ $a_{13}^+a_{14}\|(a_{36}a_{11}^+a_{12}^+a_{18}^+a_{15}^+)^?a_{13}^+a_{14}^?\|(a_{12}\|((a_{28}\|a_{34}\|a_{24}^?a_{21})a_{11}^+a_{12}^+a_{18})^?a_{15}^+)a_{13}^+a_{14}\|a_{19}a_{11}^+a_{12}$ $(a_{15}^*a_{13}^+a_{14}\|a_{18}(a_{13}^+\|a_{15}^+a_{13}^+a_{14}))\|a_{11}^+((a_{15}^+\|a_{18})a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}^?\|a_{18}^+a_{15}^*a_{13}^+a_{14}^?))^?)^?\|$ $a_{13}^+a_{14}^?\|a_{12}^+a_{18}^?a_{13}^+a_{14}\|a_{11}^+(a_{15}^*a_{13}^+a_{14}^?\|a_{18}a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{14}\|a_{18}^+(a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)$ $\|a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)\|a_{10}((a_{19}\|a_{34})a_{11}^+a_{12}^+a_{18}^*a_{15}^+a_{13}^+a_{14}\|(a_{12}^+\|((a_{24}\|a_{28})a_{11}^+a_{12}^+\|a_{43}$ $a_{11}a_{12}a_{18})a_{15}^+)a_{13}^+a_{14}\|a_{36}a_{11}^+(a_{18}a_{15}a_{13}^+\|a_{12}(a_{18}a_{15}^+a_{13}^+a_{14}\|a_{15}^+a_{13}^+a_{14}^?))\|a_{22}a_{11}^+a_{12}(a_{15}^*a_{13}^+$ $a_{14}\|a_{18}a_{15}^+a_{13}^+)\|a_{17}a_{11}a_{12}(a_{18}a_{15}a_{13}^+a_{14}\|a_{13}^+a_{14}^?)\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}a_{13}^+a_{14}^?\|a_{15}^+a_{13}^+a_{14}\|a_{12}^+$ $(a_{18}^+a_{15}^*a_{13}^+a_{14}^?\|a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)^?\|a_{27}^+(a_{12}^?a_{13}^+a_{14}\|a_{11}^+(a_{15}a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}\|$ $a_{18}a_{15}^+a_{13}^+a_{14})))\|a_{16}^+((a_{22}\|((a_{34}a_{11}a_{12})^?a_{15}\|(a_{35}a_{11})^?a_{12}\|a_{24}a_{11}^+a_{12}^+a_{18})a_{13}^+)^?a_{14}\|a_{19}a_{13}^+\|$ $a_{27}^+(a_{13}^+a_{14}^?\|a_{11}^+((a_{15}^+\|a_{18})a_{13}^+a_{14}\|a_{12}^+(a_{18}^+a_{15}^*a_{13}^+a_{14}\|a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14}))\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}a_{15}^+$ $a_{13}^+a_{14}\|a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}^?\|a_{18}^+a_{15}^*a_{13}^+a_{14}^?)^?)\|a_{10}(a_{29}a_{11}^+a_{12}a_{18}a_{15}a_{13}^+a_{14}\|a_{19}(a_{13}a_{14}\|$ $a_{11}^+a_{12}a_{18}^?a_{15}^+a_{13}^+a_{14})\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}a_{13}^+a_{14}^?\|a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{14}\|a_{15}^*a_{13}^+a_{14}^?\|a_{18}^+(a_{14}\|a_{15}^+($ $a_{14}\|a_{13}^+a_{14}^?)\|a_{13}^+a_{14}^?)))))^?\|a_{13}^+a_{14}^?\|a_{12}a_{15}^*a_{13}^+a_{14}\|a_{11}^+(a_{18}^+a_{15}^*a_{13}^+a_{14}\|a_{12}^+a_{13}^+a_{14}^+\|a_{12}$ $(a_{18}^+(a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14})\|a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)\|a_{10}((a_{12}\|(a_{24}\|a_{30}a_{19})a_{11}a_{12}a_{15}^+)a_{13}^+a_{14}\|$ $a_{13}^+a_{14}^?\|a_{11}^+(a_{18}a_{13}^+\|a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{18}^+(a_{13}^*a_{14}\|a_{15}^+a_{13}^+a_{14}^?)\|a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14}^?))))^?\|a_6^+a_7^+$ $a_8^+(a_9^+(a_{27}a_{11}a_{12}a_{13}^+a_{14}\|a_{19}a_{11}a_{18}a_{15}a_{13}^+\|a_{16}^+(a_{36}a_{11}^+(a_{15}a_{13}^+a_{14}\|a_{12}a_{18}a_{15}a_{13}^+)\|a_{27}^+(a_{13}^+$ $\|a_{11}a_{12}a_{13}^+a_{14}^?)\|a_{19}a_{13}^+\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}a_{15}a_{13}^+\|a_{15}a_{13}^+a_{14}^?\|a_{12}^+(a_{18}^?a_{15}^+a_{13}^+a_{14}\|a_{13}^+a_{14}^?))\|a_{10}$ $(a_{13}^+\|a_{36}a_{11}^+a_{12}a_{18}a_{15}^+a_{13}^+a_{14}^?\|a_{11}^+a_{12}^?a_{18}^+a_{15}^+a_{13}^+a_{14}))\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}(a_{15}a_{13}^+\|a_{13}^+a_{14})\|a_{12}^+$ $a_{15}^?a_{13}^+a_{14}^?)\|a_{10}a_{11}^+a_{12}(a_{13}^+\|a_{15}a_{13}^+a_{14}^?))\|a_{16}((a_{10}a_{11}^+a_{12}a_{18}a_{15})^?a_{13}^+a_{14}\|a_{11}a_{12}a_{13}^+))\|a_4^+$ $a_5^+(a_7^+a_8^+((a_{12}\|a_{15}^+)^?a_{13}^+a_{14}^?\|(a_{24}\|(a_{17}\|a_{19}\|a_{31}\|(a_{39}a_{11}\|a_{34}a_{11}^+a_{12}a_{18}^+)a_{15})a_{13}^+)^?a_{14}\|a_9^+$ $((a_{30}a_{19}a_{11}a_{12}a_{15}a_{13}^+)^?a_{14}\|a_{25}a_{22}a_{11}^+a_{12}a_{15}a_{13}^+\|a_{15}^*a_{13}^+a_{14}^?\|a_{43}^+((a_{21}\|(a_{37}a_{11}\|a_{20}a_{11}a_{12}$ $a_{18})a_{15}^+)^?a_{13}^+a_{14}\|a_{28}(a_{12}^?a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{18}^?a_{15}^+a_{13}^+a_{14})\|a_{23}(a_{13}\|(a_{12}\|a_{11}^+a_{12}^+a_{15})a_{13}^+a_{14})$ $\|a_{22}(a_{12}^?a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{18}^?a_{15}^+a_{13}^+a_{14})\|a_{11}^+a_{12}^+a_{18}^*a_{15}^+a_{13}^+a_{14})\|a_{42}^+(a_{14}\|a_{15}^+a_{13}^+a_{14}^?\|a_{27}^+a_{11}$ $a_{12}a_{15}^?a_{13}^+\|a_{11}^+(a_{13}^+\|a_{18}a_{15}^?a_{13}^+a_{14}^?\|a_{15}^+a_{13}^+a_{14}^?\|a_{12}^+(a_{14}\|a_{18}^+(a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)\|a_{15}^+(a_{14}$ $\|a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)\|a_{10}a_{11}^+a_{12}^+(a_{13}^+\|a_{15}^+a_{13}^+a_{14}\|a_{18}^+a_{15}^+a_{13}^+a_{14}^?))^?\|a_{41}(a_{13}^+a_{14}^?\|a_{12}a_{13}^+a_{14}\|$ $a_{11}^+a_{12}^+a_{18}^?a_{13}^+a_{14})\|a_{40}(a_{13}^+a_{14}\|a_{11}^+a_{12}^+(a_{18}^+(a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14}))\|a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?))^?\|$ $a_{39}((a_{15}a_{13}^+)^?a_{14}\|a_{12}a_{13}^+\|a_{13}^+a_{14}^?\|a_{11}^+(a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{18}^+a_{15}^*a_{13}^+a_{14}^?\|a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)^?$ $\|a_{13}^+a_{14}^?))^?\|a_{38}(a_{37}^+a_{11}a_{12}^+\|a_{11}a_{12}a_{18}a_{15})a_{13}^+a_{14}\|a_{37}^+((((a_{10}\|a_{38})a_{11}^+a_{12}^+)^?a_{15}a_{13}^+)^?a_{14}\|$ $a_{13}^+a_{14}^?\|a_{12}(a_{18}a_{14}\|a_{13}^+a_{14}^?)\|a_{11}^+(a_{15}a_{13}^+a_{14}^?\|a_{12}^+(a_{14}\|a_{18}^+(a_{14}\|a_{15}^*a_{13}^+a_{14}^?)\|a_{15}^+(a_{14}\|a_{13}^+$ $a_{14}^?)\|a_{13}^+a_{14}^?)^?)^?\|a_{36}((a_{39}\|a_{42})a_{11}^+a_{12}a_{18}^+a_{15}a_{13}^+\|a_{12}a_{13}^+a_{14}\|a_{11}^+(a_{15}a_{13}^+\|a_{12}(a_{18}a_{15}^+a_{13}^+$ $a_{14}^?\|a_{15}a_{13}^+)))\|a_{34}^+(a_{28}a_{11}^+(a_{15}a_{13}^+a_{14}\|a_{12}^+a_{18}^*a_{15}^+a_{13}^+a_{14})\|a_{23}a_{11}^+(a_{12}^+a_{18}^+)^?a_{15}^+a_{13}^+a_{14}\|$ $a_{22}^+(a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{18}^*a_{15}^+a_{13}^+a_{14})\|a_{21}a_{11}a_{18}a_{13}^+a_{14}\|a_{11}^+(a_{15}a_{13}^+a_{14}\|a_{12}^+(a_{15}^*a_{13}^+a_{14}\|$ $a_{18}^+a_{15}^*a_{13}^+a_{14}))\|a_{32}(((a_{27}\|a_{12}^+a_{15}^+)a_{13}^+)^?a_{14}\|a_{13}^+a_{14}^?\|a_{11}^+(a_{18}^+a_{15}^+a_{13}^+a_{14}\|a_{12}^+(a_{14}\|a_{18}^+$ $(a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{13}^+a_{14}^?)^?\|a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)\|a_{13}^+a_{14}^?)^?)^?\|a_{31}((((a_{27}^+a_{11}a_{12})^?a_{15}\|a_{10}a_{11}$ $a_{12})a_{13}^+)^?a_{14}\|a_{13}^+a_{14}^?\|a_{12}(a_{13}^+a_{14})^?\|a_{11}^+(a_{18}a_{13}^+a_{14}^?\|a_{15}^+(a_{13}^+a_{14}^?)^?\|a_{12}^+(a_{14}\|a_{15}^*a_{13}^+a_{14}^?$ $\|a_{18}^+a_{15}^*a_{13}^+a_{14}^?)^?)^?\|a_{28}(((a_{27}a_{11}\|a_{10}a_{11}a_{12}a_{18})^?a_{15}a_{13}^+)^?a_{14}\|a_{13}^+a_{14}^?\|a_{12}(a_{13}^+a_{14})^?\|$ $a_{11}^+(a_{18}a_{15}^*a_{13}^+a_{14}\|a_{15}^+a_{13}^+a_{14}^?\|a_{13}^+a_{14}\|a_{12}^+(a_{14}\|a_{18}^+(a_{15}^+(a_{14}\|a_{13}^+a_{14}^?)\|a_{13}^+a_{14}^?)\|a_{15}^+(a_{14}\|a_{13}^+$ $a_{14}^?)^?\|a_{13}^+a_{14}^?)^?)^?\|a_{27}^+((a_{37}\|((a_{21}\|a_{41})a_{11}^+a_{12}^+)^?a_{15}^+)a_{13}^+a_{14}\|a_{43}(a_{23}^?a_{11}^+a_{12}^+a_{18}^?a_{15}^+a_{13}^+$ $a_{14}\|a_{22}(a_{13}^+a_{14}\|a_{11}^+(a_{15}a_{13}^+\|a_{12}a_{18}a_{15}^+a_{13}^+a_{14})))\|a_{42}a_{11}^+a_{12}^+(a_{18}(a_{15}^+a_{13}^+a_{14}\|a_{13}^+a_{14}^?)$ $\|a_{15}a_{13}^+a_{14}^?\|a_{13}^+a_{14})\|a_{39}(a_{13}^+a_{14}\|a_{11}^+a_{12}^+a_{15}^*a_{13}^+a_{14})\|a_{32}(a_{15}a_{13}^+a_{14}\|a_{13}^+a_{14}^?\|a_{11}(a_{18}^?a_{15}^+$	11	12749	——

Table 6: Results of Inference Using Different Methods on **Entry**

Sample Size	From	Element Name	ND	$\lvert RE\rvert$	CC
50000	SwissPort	Entry			
Method	**Regular Expression**				
Altova XMLSpy	$a^{+}_{13}a14\lvert a_{12}(a^{*}_{15}a^{+}_{13}a_{14}\lvert a_{18}a^{?}_{15}a^{+}_{13}a_{14})))\lvert a_{28}a^{+}_{11}a^{+}_{12}(a^{*}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a_{26}(a^{+}_{13}a_{14}\lvert a_{11}a_{12}(a^{+}_{13}\lvert a_{18}$ $a_{15}a^{+}_{13}a_{14}))\lvert a_{25}(a_{22}a_{11}a_{12}(a_{15}\lvert a_{18})a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}a_{18}a_{15}a^{+}_{13})\lvert a_{24}(a^{?}_{32}a_{11}a_{12}a^{?}_{15}a^{+}_{13}a_{14}\lvert a_{22}a_{11}$ $a_{12}a^{?}_{15}a^{+}_{13}a_{14})\lvert a_{23}(a^{+}_{11}a^{+}_{12}a_{18})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{22}((a_{28}a_{11}a_{12})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert$ $a^{+}_{18}(a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))))\lvert a^{+}_{17}a^{+}_{11}a_{12}(a_{13}\lvert a_{18}a_{15}a^{+}_{13}a_{14})\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}$ $\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}))\lvert a_{26}(a_{27}a^{+}_{11}a_{12}a^{+}_{13}\lvert a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}((a^{+}_{15}\lvert a_{18})a^{+}_{13}a^{?}_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}$ $(a^{+}_{15}(a^{+}_{13}a^{?}_{14})^{?}\lvert a^{+}_{13}a^{?}_{14}))))^{?}\lvert a_{24}(((a_{38}a_{37}a_{11}a_{12}a_{18}\lvert a_{33}a_{32}a^{+}_{11}a_{12})a^{+}_{15}a^{+}_{13})^{?}a_{14}\lvert a_{21}a^{+}_{11}a_{12}a^{+}_{15}a_{13}$ $\lvert a_{32}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}a^{+}_{12}(a_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}))\lvert a_{28}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}a_{12}((a^{+}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{15}$ $a^{+}_{13}a^{?}_{14}))\lvert a_{22}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}(a_{18}(a^{+}_{15}a^{+}_{13}\lvert a^{+}_{13}a_{14})\lvert a^{+}_{15}a^{+}_{13}a_{14}))\lvert a^{+}_{11}a^{+}_{12}(a_{15}\lvert a_{18})a^{+}_{13}a_{14})\lvert a^{+}_{23}(((a_{12}$ $\lvert a_{15})a^{+}_{13})^{?}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{+}_{13}\lvert a_{18}a^{+}_{13}a_{14}\lvert a^{+}_{15}(a^{+}_{13}a_{14})^{?}\lvert a^{+}_{12}(a_{14}\lvert a_{18}(a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))\lvert a^{+}_{15}(a^{+}_{13}$ $a^{?}_{14})^{?}\lvert a^{+}_{13}a^{?}_{14}))^{?})^{?}\lvert a^{+}_{22}(((a_{12}\lvert(a_{34}a_{11}a_{12}a_{18}\lvert a_{27}a_{11}\lvert a_{25}a_{11}a_{12})^{?}a^{+}_{15})a^{+}_{13})^{?}a_{14}\lvert a_{28}a_{11}a_{12}(a_{15}\lvert a^{+}_{13}$ $a_{14})^{?}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{15}(a_{14}\lvert a^{+}_{13}a^{?}_{14})^{?}\lvert a^{+}_{13}a^{?}_{14})^{?})$ $\lvert a_{10}(a^{+}_{12}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{?}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}))^{?}\lvert a_{21}(a^{+}_{13}a_{14}\lvert a^{+}_{11}(a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}$ $a^{+}_{15}(a^{+}_{13}a^{?}_{14})^{?}))))\lvert a^{+}_{20}(a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{12}(a_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{15}(a_{14}\lvert a^{+}_{13}a^{?}_{14})^{?}\lvert a^{+}_{13}a^{?}_{14}$ $)^{?})\lvert a_{10}a^{+}_{11}a^{+}_{12}a^{*}_{18}a_{15}a^{+}_{13}a_{14})^{?}\lvert a_{19}(a_{17}a_{11}a_{12}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}((a^{?}_{18}a^{+}_{15})^{?}a^{+}_{13}$ $a^{?}_{14})^{?}))\lvert a^{+}_{17}(a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a_{14}))))\lvert a^{+}_{16}((a^{+}_{12}\lvert a_{15})^{?}$ $a^{+}_{13}a^{?}_{14}\lvert(a_{40}a_{11}a_{12}a_{18}a^{+}_{15}a^{+}_{13})^{?}a_{14}\lvert a^{+}_{43}(a_{37}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{?}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}$ $)))\lvert a_{28}(a^{?}_{12}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}a^{*}_{18}a^{+}_{15}a^{+}_{13}a_{14})\lvert a_{23}(a^{+}_{13}a^{?}_{14}\lvert a_{12}a^{+}_{13}a_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a_{12}a^{?}_{18}a^{+}_{15}$ $a^{+}_{13}a_{14}))\lvert a^{+}_{22}(a^{?}_{12}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{+}_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}))\lvert a_{19}a^{+}_{11}a^{?}_{12}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a_{12}$ $a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}a^{+}_{15}a^{+}_{13}a_{14}))\lvert a_{42}((a_{12}\lvert a^{?}_{15}a^{+}_{13})^{?}a_{14}\lvert a^{+}_{11}(a_{18}(a_{15}a_{13}\lvert a^{+}_{13}a_{14})\lvert a^{+}_{12}((a^{+}_{15}a^{+}_{13})^{?}a_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a^{?}_{14}))^{?}\lvert a_{41}(a^{+}_{13}a^{?}_{14}\lvert a_{12}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a_{15}\lvert a_{18})^{?}a^{+}_{13}a_{14})\lvert a_{39}($ $a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{?}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}))))\lvert a_{38}a_{37}(a^{+}_{13}$ $a^{?}_{14}\lvert a^{+}_{11}a^{+}_{12}(a_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14})^{?})\lvert a^{+}_{37}(a_{14}\lvert a^{?}_{12}a^{+}_{13}a^{+}_{14}\lvert a^{+}_{11}(a_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}$ $a_{14}\lvert a^{+}_{12}(a_{14}\lvert a^{+}_{18}(a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))\lvert a^{+}_{15}(a_{14}\lvert a^{+}_{13}a^{?}_{14})\lvert a^{+}_{13}a^{?}_{14})^{?}))^{?}\lvert a_{36}((a_{22}\lvert a_{28})a^{+}_{11}a^{+}_{12}a_{18}a^{+}_{15}$ $a^{+}_{13}a_{14}\lvert a_{33}a_{32}a_{13}\lvert a_{32}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}a_{12}(a_{18}a_{15}a^{+}_{13}\lvert a^{+}_{13}a_{14}))\lvert a^{+}_{11}(a^{?}_{18}a_{15}a^{+}_{13}\lvert a_{12}(a^{+}_{18}a_{15}a^{+}_{13}a^{?}_{14}$ $\lvert a^{+}_{15}a^{+}_{13}a_{14}))))\lvert a^{+}_{35}((a_{23}\lvert(a_{24}a_{22}a^{+}_{11}a_{12}\lvert a^{+}_{22}a^{+}_{11}a_{12}a_{18})a^{+}_{15})a^{+}_{13}a_{14}\lvert a_{11}a^{+}_{12}a_{15}a^{+}_{13}a_{14})\lvert a^{+}_{34}((a^{+}_{22}\lvert a_{28})a^{+}_{11}a_{12}a^{*}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert((a_{23}\lvert a_{40})a^{+}_{11}a_{12}a^{+}_{18}a^{+}_{15}\lvert a_{21}a_{11}a_{18})a^{+}_{13}a_{14}\lvert a^{+}_{11}(a_{18}a^{+}_{13}a_{14}\lvert$ $a^{+}_{12}(a^{?}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a_{14}))))\lvert a^{+}_{33}a_{32}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a_{18}(a_{15}(a^{+}_{13}a_{14})^{?}\lvert a^{+}_{13}a_{14}))^{?}$ $)\lvert a_{32}((a_{15}a^{+}_{13})^{?}a_{14}\lvert a_{39}a^{+}_{13}\lvert a^{?}_{12}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{*}_{15}a^{+}_{13}a_{14}\lvert a_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{+}_{18}(a^{+}_{15}(a_{14}\lvert a^{+}_{13}$ $a^{?}_{14})\lvert a^{+}_{13}a^{?}_{14}))\lvert a^{+}_{15}(a_{14}\lvert a^{+}_{13}a^{?}_{14})\lvert a^{+}_{13}a^{?}_{14}))^{?})^{?}\lvert a_{31}(((a_{12}\lvert a_{15})a^{+}_{13})^{?}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a_{15}a^{+}_{13}\lvert a_{15}$ $a^{+}_{13}a_{14}\lvert a^{+}_{12}(a_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{15}(a^{+}_{13}a^{?}_{14})^{?}\lvert a^{+}_{13}a^{?}_{14})^{?}))^{?}\lvert a_{29}(a^{+}_{22}a_{11}a_{12}a^{?}_{18}a_{15}a^{+}_{13}$ $a_{14}\lvert a^{+}_{13}a_{14}\lvert a_{11}a_{12}a^{?}_{15}a^{+}_{13}a_{14})\lvert a^{+}_{28}((a_{12}a^{+}_{13})^{?}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{12}$ $(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}))^{?}\lvert a^{+}_{27}((a_{38}a_{37}a^{+}_{11}a^{+}_{12}\lvert a_{26}a_{11}a_{12}a_{15})a^{+}_{13}a_{14}\lvert a^{+}_{43}(a^{?}_{37}a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}$ $\lvert a^{+}_{12}a^{?}_{18}a^{+}_{15}a^{+}_{13}a_{14})\lvert((a_{23}\lvert a_{24}a^{+}_{22})a^{+}_{11}a^{+}_{12}a^{+}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a_{28}a^{+}_{11}a^{+}_{12}(a^{?}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a_{22}a^{+}_{11}($ $a^{+}_{18}a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}))\lvert a_{42}a^{+}_{11}a^{+}_{12}a^{?}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{41}a^{+}_{11}a^{+}_{12}(a_{15}\lvert a^{+}_{18})^{?}a^{+}_{13}$ $a_{14}\lvert a_{39}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{*}_{15}a^{+}_{13}a_{14}\lvert a_{18}(a^{+}_{13}\lvert a_{15}a^{+}_{13}a_{14})))\lvert a_{37}(a^{+}_{13}a_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}($ $a^{+}_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))))\lvert a_{36}a^{+}_{11}(a_{18}a_{15}a^{+}_{13}\lvert a_{12}a^{+}_{18}a^{+}_{15}a^{+}_{13}a^{?}_{14})\lvert a^{+}_{35}(a^{?}_{24}a^{+}_{22})^{?}a^{+}_{11}$ $a^{+}_{12}a^{+}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{34}a^{*}_{22}a^{+}_{11}a^{+}_{12}a^{+}_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{33}a_{32}(a^{?}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{+}_{18}a^{?}_{15}a^{+}_{13}$ $a_{14})\lvert a_{32}((a_{15}\lvert a_{39}a_{12})a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a_{18}a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}$ $a_{14}))\rvert a_{31}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}(a_{18}(a^{+}_{13}\lvert a_{15}a^{+}_{13}a_{14})\lvert a_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))\lvert a_{29}(a_{22}a^{+}_{11}a^{+}_{12}(a_{18}a^{?}_{15}a^{+}_{13}$ $a_{14}\lvert a_{15}a^{+}_{13}a_{14})\lvert a^{+}_{11}a^{+}_{12}a_{15}a^{+}_{13}a_{14})\lvert a_{28}(a^{+}_{13}a_{14}\lvert a^{+}_{11}(a_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{+}_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}$ $\lvert a^{+}_{13}a^{?}_{14}))\lvert a^{+}_{25}a_{22}(a_{28}a^{+}_{11}a_{12}a_{18}a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}a^{*}_{18}a^{+}_{15}a^{+}_{13}a_{14})\lvert a^{+}_{24}((a^{?}_{21}a^{+}_{11}a_{12}a^{+}_{18}\lvert a_{37}a_{11}$ $a_{12})a_{15}a^{+}_{13}a_{14}\lvert a^{+}_{38}a_{37}a_{11}a_{12}(a_{18}a_{15}a^{+}_{13}a^{?}_{14}\lvert a_{15}a^{+}_{13}a_{14})\lvert a^{+}_{33}a_{32}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{+}_{18}(a^{+}_{15}a^{+}_{13}a^{?}_{14}$ $\lvert a^{+}_{13}a_{14}))\lvert a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}))\rvert a_{32}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a_{18}a^{+}_{15}a^{+}_{13}a_{14}))\rvert a_{29}a_{22}a^{+}_{11}a_{12}a^{+}_{18}a^{?}_{15}$ $a^{+}_{13}a_{14}\lvert a_{28}a^{+}_{11}a^{+}_{12}(a^{+}_{18}a^{?}_{15}a^{+}_{13}a_{14}\lvert a_{15}a^{+}_{13}a_{14}))\lvert a_{25}(a_{29}a_{22}a^{+}_{11}a_{12}a_{18}a^{+}_{13}a_{14}\lvert a^{+}_{22}(a^{+}_{28}a_{11}a_{12}a^{?}_{18}a^{+}_{15}a^{+}_{13}$ $a_{14}\lvert a^{+}_{11}a_{12}a^{+}_{18}a^{+}_{15}a^{+}_{13}a_{14}))\lvert a^{+}_{22}(a_{28}a_{11}a_{12}a_{18}a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{*}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}))\rvert a_{23}a^{+}_{11}a^{+}_{12}($ $a^{*}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{22}(a_{28}a^{+}_{11}a_{12}(a^{+}_{18}a^{?}_{15}a^{+}_{13}a_{14}\lvert a_{15}a^{+}_{13}a_{14})\lvert a^{+}_{13}a_{14}\lvert a^{+}_{11}(a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}$ $a^{?}_{14}\lvert a^{+}_{18}(a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}a_{14}))))\rvert a_{21}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a_{18}a^{?}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}))\rvert a_{19}a^{+}_{11}a_{12}a^{+}_{15}a^{+}_{13}$ $a_{14}\lvert a_{17}a^{+}_{11}a_{12}a^{+}_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a^{*}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}a^{?}_{14}\lvert a_{18}a^{*}_{15}$ $a^{+}_{13}a^{?}_{14}))))\lvert a_{26}(a^{?}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{11}a_{12}((a^{+}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}))^{?}\lvert a^{+}_{25}a_{22}a^{+}_{11}a^{+}_{12}a^{*}_{18}a_{15}a^{+}_{13}a_{14}$ $\lvert a_{24}(a^{+}_{38}a^{+}_{37}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{?}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14})\lvert a^{+}_{33}a_{32}(a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a_{18}a^{+}_{13}a_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}$ $a^{?}_{14}\lvert a^{+}_{18}a^{+}_{15}a^{+}_{13}a_{14}))\rvert a_{32}(a_{13}a_{14}\lvert a^{+}_{11}(a_{18}a_{15}a_{13}\lvert a_{15}a_{13}a^{?}_{14}\lvert a^{+}_{12}(a_{18}a^{?}_{15}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{13}$ $a_{14})^{?}))\rvert a_{29}a_{22}(a^{+}_{11}a^{+}_{12}a_{18}a_{15})^{?}a^{+}_{13}a_{14}\lvert a_{28}a_{11}a^{+}_{12}(a^{?}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14}\lvert a^{+}_{25}a^{?}_{29}a_{22}a^{+}_{11}a^{+}_{12}a^{+}_{18}a^{+}_{15}$ $a^{+}_{13}a_{14}\lvert a^{+}_{22}(a^{+}_{13}a_{14}\lvert a^{+}_{11}a^{+}_{12}(a^{*}_{18}a^{+}_{15})^{?}a^{+}_{13}a_{14})\rvert a_{21}(a^{+}_{13}a_{14}\lvert a_{11}a_{12}(a^{+}_{13}\lvert a^{+}_{15}a^{+}_{13}a_{14}))\rvert a^{+}_{11}a_{12}a_{15}$ $a^{+}_{13}a_{14})\rvert a^{+}_{23}((a_{22}a_{28}a^{+}_{11}a_{12}a_{18}a^{+}_{15}a^{+}_{13})^{?}a_{14}\lvert a^{+}_{13}a^{?}_{14}\lvert a^{+}_{11}(a^{?}_{18}a^{+}_{13}a_{14}\lvert a^{+}_{15}a^{+}_{13}a^{?}_{14}\lvert a^{+}_{12}(a^{*}_{15}a^{+}_{13}$ $a^{?}_{14}\lvert a^{+}_{18}a^{*}_{15}a^{+}_{13}a^{?}_{14}))))^{?}\lvert a^{+}_{22}(((a_{12}\lvert a_{27}a^{+}_{11}a^{+}_{12}a_{15})a^{+}_{13})^{?}a_{14}\lvert a_{28}a^{+}_{11}a^{+}_{12}(a_{18}a^{+}_{15}a^{+}_{13}a^{?}_{14}\rvert$	11	12749	——

Table 7: Results of Inference Using Different Methods on **Entry**

Sample Size	From	Element Name	ND	$\lvert RE\rvert$	CC
50000	SwissPort	Entry			
Method	**Regular Expression**				
Altova XMLSpy	$a_{15}a_{13}^{+}a_{14})\lvert a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{18}a_{15}^{?}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})))\lvert a_{10}a_{11}^{+}a_{12}^{+}a_{18}^{?}a_{15}a_{13}^{+}a_{14})^{?}\lvert a_{21}(a_{13}^{*}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}((a_{18}a_{15}^{+})^{?}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}a_{13}^{*}a_{14}))))^{?}\lvert a_{20}^{+}(a_{13}^{+}a_{14}^{?}\lvert a_{12}a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}a_{15}^{+}(a_{13}^{+}a_{14}^{?})^{?}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{13}^{+}a_{14}^{?})))^{?}\lvert a_{19}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{18}a_{13}^{+}a_{14}\lvert a_{12}((a_{18}^{+}a_{15}^{+})^{?}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})))\lvert a_{17}(a_{13}^{+}a_{14}\lvert a_{11}^{+}((a_{15}\lvert a_{18})a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}a_{15}^{+}a_{13}^{+}a_{14}))))\lvert a_{11}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}(a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?})\lvert a_{10}((a_{26}\lvert a_{40})a_{11}^{+}a_{12}^{+}a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert(a_{15}\lvert(a_{30}a_{19}a_{11})^{?}a_{12})a_{13}^{+}a_{14}\lvert a_{43}^{+}((((a_{17}\lvert a_{40}^{+}\lvert a_{29}a_{22}\lvert a_{24}a_{28})a_{11}^{+}a_{12}^{+}a_{18}\lvert(a_{20}\lvert a_{38}a_{37})a_{11}^{+}a_{12}^{+})a_{15}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{37}a_{11}^{+}a_{12}(a_{18}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?})\lvert a_{28}(a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}))\lvert a_{23}a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14})\lvert a_{22}a_{11}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))\lvert a_{19}a_{11}a_{12}a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{*}a_{15}^{+})^{?}a_{13}^{+}a_{14})\lvert a_{42}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))))\lvert a_{41}a_{11}^{+}a_{12}^{+}(a_{15}\lvert a_{18}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{39}a_{11}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})))\lvert a_{38}a_{37}a_{11}^{+}a_{12}^{+}(a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{37}(a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{14}\lvert a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}(a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})))))\lvert a_{36}((a_{31}\lvert a_{32})a_{11}a_{12}a_{18}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{18}a_{15}a_{13}^{+}\lvert a_{12}^{+}(a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}a_{13}^{+}a_{14})))\lvert a_{35}^{+}(a_{28}a_{11}^{+}a_{12}^{+}\lvert a_{22}a_{11}^{+}a_{12}^{+}a_{18}^{+})a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{34}^{+}((a_{22}^{+}\lvert a_{23}\lvert a_{28})a_{11}^{+}a_{12}^{+}a_{18}^{+}a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}a_{13}^{+}a_{14}\lvert a_{33}^{+}a_{32}a_{11}^{+}a_{12}^{+}((a_{18}^{+}a_{15}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?})\lvert a_{32}(a_{13}^{*}a_{14}\lvert a_{11}^{+}(a_{18}a_{15}^{?}a_{13}^{+}a_{14}\lvert a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))))\lvert a_{31}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})))\lvert a_{29}((a_{11}^{+}a_{12}^{+}a_{15})^{?}a_{13}^{+}a_{14}\lvert a_{22}^{+}((a_{28}a_{11}a_{12}a_{18}a_{15}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}(a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}a_{13}^{+}a_{14}))))\lvert a_{28}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})))\lvert a_{25}^{+}a_{22}^{+}a_{11}^{+}a_{12}^{+}(a_{18}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?})\lvert a_{24}(a_{38}^{+}a_{37}^{+}a_{11}^{+}a_{12}^{+}(a_{18}^{*}a_{15}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{37}a_{11}a_{12}a_{18}a_{15}a_{13}^{+}a_{14}\lvert a_{33}^{+}a_{32}a_{11}^{+}a_{12}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}a_{13}^{+}a_{14}^{?})\lvert a_{32}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14})\lvert a_{29}(a_{28}a_{11}^{+}a_{12}a_{18}^{+}a_{15}a_{13}^{+}a_{14}\lvert a_{22}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{15}a_{13}^{+}a_{14}))))\lvert a_{28}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}))\lvert a_{25}a_{29}a_{22}a_{11}a_{12}a_{18}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{22}^{+}(a_{28}a_{11}a_{12}a_{18}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}))\lvert a_{21}a_{11}^{+}a_{12}(a_{18}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{15}a_{13})\lvert a_{11}a_{12}a_{15}^{?}a_{13}^{+}a_{14})\lvert a_{23}^{+}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{13}^{+}a_{14}^{?})))\lvert a_{22}^{+}(a_{28}a_{11}a_{12}a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))\lvert a_{20}^{+}(a_{13}^{+}a_{14}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{13}^{+}a_{14}^{?})))\lvert a_{21}a_{11}^{+}a_{12}^{+}(a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{20}^{+}(a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{12}^{+}(a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))))\lvert a_{19}(a_{17}a_{11}^{+}a_{12}^{+}a_{18}^{?}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))\lvert a_{18}^{?}a_{15}a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}^{?}))\lvert a_{17}^{+}(a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}^{?})^{?})^{?})^{?}\lvert a_{12}^{+}(a_{14}\lvert(a_{18}^{?}a_{15}^{+})^{?}a_{13}^{+}a_{14}^{?})^{?}\lvert a_{11}^{+}(a_{18}^{+}(a_{14}\lvert a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{15}^{+}((a_{26}a_{13}^{+})^{?}a_{14}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?}\lvert a_{12}^{+}(a_{14}\lvert a_{18}^{+}(a_{14}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}\lvert a_{10}((((a_{38}a_{37}\lvert a_{30}a_{19})a_{11}a_{12}a_{18}\lvert a_{33}a_{32}a_{11}a_{12})a_{15}^{+}\lvert a_{25}^{+}a_{22}^{+}a_{11}^{+}a_{12}a_{18}^{+})a_{13}^{+}a_{14}\lvert a_{15}a_{13}^{+}\lvert a_{43}^{+}(((a_{19}\lvert a_{20}\lvert a_{37}\lvert a_{40})a_{11}^{+}a_{12}^{+}a_{18}^{+}a_{15}^{+})^{?}a_{13}^{+}a_{14}\lvert a_{28}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14})\lvert a_{23}a_{11}^{+}a_{12}^{?}a_{18}^{+}a_{15}a_{13}^{+}a_{14}\lvert a_{22}^{+}a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{*}a_{15}^{+})^{?}a_{13}^{+}a_{14})\lvert a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{11}^{+}((a_{15}\lvert a_{18})a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}))))\lvert a_{42}((a_{12}\lvert a_{15})a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}((a_{15}\lvert a_{18})a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}))))^{?}\lvert a_{41}a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}\lvert a_{18}^{+})^{?}a_{13}^{+}a_{14})\lvert a_{40}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{39}(a_{13}^{+}a_{14}^{?}\lvert a_{12}a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14}^{?}))\lvert a_{37}(a_{13}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{14}\lvert a_{18}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14})\lvert a_{15}^{+}(a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}))\lvert a_{36}(a_{42}a_{11}^{+}a_{18}a_{15}a_{13}^{+}\lvert a_{11}^{+}(a_{18}a_{15}a_{13}^{+}\lvert a_{12}^{+}a_{18}a_{15}^{+}a_{13}^{+}a_{14}))\lvert a_{34}^{+}(a_{22}^{?}a_{11}^{+}a_{12}^{+}a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}\lvert(a_{23}\lvert a_{28})a_{11}^{+}a_{12}^{+}a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14})\lvert a_{32}(a_{13}a_{14}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14})))\lvert a_{31}(a_{12}^{?}a_{13}^{+}a_{14}\lvert a_{11}^{+}(a_{18}^{+}a_{15}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14})^{?}))^{?}\lvert a_{29}(a_{22}a_{11}^{+}a_{12}\lvert a_{11}^{+}a_{12}a_{18}^{+})a_{15}a_{13}^{+}a_{14}\lvert a_{28}(((a_{12}a_{15})^{?}a_{13}^{+})^{?}a_{14}\lvert a_{11}^{+}(a_{18}^{*}a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}(a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})))\lvert a_{26}(a_{15}a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}^{*}a_{15}^{+})^{?}a_{13}^{+}a_{14}^{?}))\lvert a_{24}((a_{33}a_{32}a_{11}a_{12}\lvert a_{25}a_{22}a_{11}a_{12}a_{18})a_{15}a_{13}^{+}a_{14}\lvert a_{21}a_{11}a_{12}a_{15}a_{13}^{+}\lvert a_{22}^{?}a_{11}^{+}a_{12}^{+}a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{32}a_{11}^{+}(a_{18}^{+}a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{18}a_{15}^{+}a_{13}^{+}\lvert a_{15}^{+}a_{13}^{+}a_{14})))\lvert a_{28}a_{11}^{+}a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}\lvert a_{18}^{+}a_{15}^{*}a_{13}^{+}a_{14}))\lvert a_{23}^{+}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{12}^{+}(a_{15}^{*}a_{13}^{+}a_{14}^{?}\lvert a_{18}^{+}(a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))))\lvert a_{22}^{+}((a_{28}a_{11})^{?}a_{12}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{18}^{+}a_{15}^{?}a_{13}^{+}a_{14}\lvert a_{15}^{+}(a_{13}^{+}a_{14}^{?})^{?}\lvert a_{13}^{+}a_{14}^{?})^{?}))\lvert a_{21}(a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{18}(a_{15}^{+}(a_{14}\lvert a_{13}^{+}a_{14}^{?})\lvert a_{13}^{+}a_{14})\lvert a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{20}^{+}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}(a_{15}a_{13}^{+}a_{14}\lvert a_{12}^{+}((a_{18}^{+}a_{15}^{+})^{?}a_{13}^{+}a_{14}^{?}\lvert a_{15}^{+}(a_{13}^{+}a_{14}^{?})^{?}))))\lvert a_{19}(a_{17}a_{11}^{+}a_{12}a_{18}^{+}a_{15}^{+}a_{13}^{+}a_{14}\lvert a_{11}^{+}a_{12}^{+}(a_{18}^{*}a_{15}^{+}a_{13}^{+}a_{14}^{?}\lvert a_{13}^{+}a_{14}))\lvert a_{17}^{+}(a_{13}^{+}a_{14}^{?}\lvert a_{11}^{+}a_{12}^{+}($	11	12749	——

Table 8: Results of Inference Using Different Methods on **Entry**

Sample Size	**From**	**Element Name**	ND	$\|RE\|$	CC
50000	SwissPort	Entry			
Method	**Regular Expression**				
Instance ToSchema	$a^*_{11}\&a^*_{33}\&a^?_{10}\&a^*_{32}\&a^*_{13}\&a^*_{35}\&a^+_{12}\&a^*_{34}\&a^*_{15}\&a^*_{37}\&a^?_{14}\&a^?_{36}\&$ $a^+_{17}\&a^*_{39}\&a^+_{16}\&a^*_{38}\&a^+_{19}\&a^+_{18}\&a^*_{40}\&a^*_{20}\&a^*_{42}\&a^*_{41}\&a^*_{22}\&a^*_{21}\&$ $a^*_{43}\&a^*_{24}\&a^*_{23}\&a^?_{26}\&a^*_{25}\&a^*_{28}\&a^*_{27}\&a^?_{29}\&a^+_1\&a^+_2\&a^+_3\&a^*_4\&$ $a^+_5\&a^*_6\&a^+_7\&a^+_8\&a^*_9\&a^?_{31}\&a^?_{30}$	1	131	$3.48 * 10^{55}$
Soa2Chare	$a^+_1a^+_2a^+_3a^*_4a^+_5a^*_6a^*_7a^+_8a^*_9a^*_{16}(a_{42}\|a_{20}\|a_{10}\|a_{40}\|a_{24}\|a_{12}\|a_{36}\|a_{34}\|a_{22}\|a_{32}\|a_{28}\|a_{38}\|a_{18}\|a_{41}$ $\|a_{26}\|a_{35}\|a_{23}\|a_{11}\|a_{33}\|a_{43}\|a_{21}\|a_{17}\|a_{39}\|a_{27}\|a_{29}\|a_{15}\|a_{37}\|a_{25}\|a_{19}\|a_{31}\|a_{30})^*a^*_{13}a^?_{14}$	1	100	——
GenEchare	$a^+_1a^+_2a^+_3a^*_4a^+_5a^*_6a^+_7a^+_8a^*_9a^*_{16}(a^+_{42}\|a^+_{20}\|a^+_{10}\|a^+_{40}\|a^+_{24}\|a^+_{12}\|a^+_{36}\|a^+_{34}\|a^+_{22}\|a^+_{32}\|a^+_{28}\|a^+_{38}\|a^+_{18}$ $\|a^+_{41}\|a^?_{26}\|a^+_{35}\|a^+_{23}\|a^+_{11}\|a^+_{33}\|a^+_{43}\|a^+_{21}\|a^+_{17}\|a^+_{39}\|a^+_{27}\|a^+_{29}\|a^+_{15}\|a^+_{37}\|a^+_{25}\|a^+_{19}\|a^+_{31}\|a_{30})^*a^*_{13}a^?_{14}$	2	125	——
learn$_{DME}{}^+$	$(a_{29}?\|a^*_6\|a^?_{26}\|a^*_{20}\|a^*_{38}\|a^*_{41}\|a^*_{39}\|a^*_{35}\|a^?_{31}\|a^*_{40}\|a^?_{30}\|a^*_{33})\&(a^?_{36}\|a^*_{25}\|a^*_{21}\|$ $a^*_{23}\|a^+_{19}\|a^*_{37})\&(a^*_{42}\|a^*_{32}\|a^+_{17}\|a^*_{34})\&(a^*_{27}\|a^?_{10})\&a^*_{43}\&a^*_{22}\&a^*_{28}\&a^*_{24}\&a^*_9\&$ $a^*_4\&a^+_2\&a^+_1\&a^+_5\&a^*_{13}\&a^*_{18}\&a^+_{15}\&a^+_7\&a^+_3\&a^+_8\&a^*_{12}\&a^*_{16}\&a^*_{11}\&a^?_{14}$	1	136	$1.48 * 10^{25}$
conMiner	$a^?_{10}a^*_{27}a^*_{34}a^*_{25}a^*_{38}a^+_{11}a^+_{12}a^+_{18}a^+_{15}\&a^+_1a^+_2a^+_3a^*_4$ $a^+_5a^*_6a^+_7a^+_8a^*_9a^*_{16}a^?_{30}a^*_{35}a^*_{41}a^*_{43}a^*_{23}a^*_{20}a^*_{40}a^*_{19}$ $a^*_{17}a^?_{26}a^?_{36}a^*_{42}a^?_{31}a^*_{24}a^*_{33}a^?_{37}a^*_{32}a^*_{39}a^*_{21}a^?_{29}a^*_{22}a^*_{28}a^*_{13}a^?_{14}$	1	128	$5.64 * 10^8$
GenESIRE	$a^+_1a^+_2a^+_3a^*_4a^+_5a^*_6a^+_7a^+_8a^*_9a^*_{16}(a^+_{10}\&(a^*_{27}\|a^?_{30})(a^*_{41}\|a^*_{35}\|a^?_{36}\|a^*_{34}\|$ $a^*_{43})(a^*_{20}\|a^*_{24}\|a^*_{23}\|a^*_{39}\|a^*_{19})(a^*_{33}\|a^*_{21}\|a^*_{17}\|a^*_{37}\|a^*_{25})a^?_{29}a^*_{11}$ $a^*_{12}a^+_{18}a^*_{15}\&(a^*_{42}\|a^*_{40}\|a^?_{26}\|a^*_{22}\|a^*_{32}\|a^*_{38}\|a^?_{31})a^*_{28})^*a^*_{13}a^?_{14}$	2	140	$1.16 * 10^6$