SMARANDACHE FREE GROUPOIDS AND ITS APPLICATION TO AUTOMATON

W.B.Vasantha and Moon Kumar Chetry

The study of free groupoids is very new and we see that the free groupoids have its application to the theory of automaton provided they satisfy a special condition namely these free groupoids should contain at least a subset which is a free semigroup. Thus motivated by this property we define in this paper the notion of Smarandache free groupoid, these Smarandache free groupoids by their very definition contains at least one free semigroup. It may happen that these Smarandache free groupoids may have more than one free semigroup in which case we see still it has more applications, for we can define several automatons which can be easily linked for a free given groupoid. Thus we in this paper define Smarandache free groupoids and give its application to automaton or linked automatons, which we choose to call as New Smarandache Automaton or New Smarandache Linked Automaton.