



A universal decision making model for restructuring networks based on Markov Random Fields*

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Abstract—The process of re-structuring physical networks is often based on local demographics. However, there are major variations across countries when defining demographics according to “local” parameters, which hinders the export of methodologies based on local specifications. This paper presents a *universal* decision making model for re-structuring networks aimed at working on a global basis since local parameters has been replaced by “internationally accepted” notions thereby allowing cross-border correlations. This a first step towards the globalization of demographic parameters which would also be fruitful in other disciplines where demographics play a role.

Importantly, the model variables can be replaced/expanded as needed thereby providing a decision making tool that can be applied to a wide range of contexts.

Index Terms—Universal Decision Model, Spatial stochastic processes (Markov and Gibbs Random Fields)