Models for the Traveling Salesman Problem and the case with positional consistency constraints

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Subtour elimination constraints play a key role in formulations for the traveling salesman problem. We review constraints that can be written with arc variables alone and others with additional variables. In many cases, the extra variables, allow straitghforward formulations for variants of the problem that are not easy to model with the arc variables alone. We give such examples in the context of the TSP with positional consistency constraints (motivated by an application in the context of the scheduling of doctor(s)/nurse(s) to patients in health services.)

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