

## Homework 10: Crystal

### Self-Parking

The self-parking feature represents one of medium complexity when compared to the rest of the project. While it does stand to impact the safety of the system in operation, the potential of this impact is not as great as when compared to the Lane Change feature. Therefore, I would assign this feature to a Crystal Orange team. I believe that this is the ideal range of team size for this feature to best reflect its importance. I feel that Clear and Yellow's respective limits of six and twenty are too low to reflect a comprehensive team capable of producing a quality result. Also, the risks associated with this rating also seem to be in-line with the feature. Parking is something done often (every time one drives), meaning that the use of this feature will play an important role in the final system. While it may not be as dangerous as some of the other aspects of driving a car, its usage and relative importance necessitates in my opinion a forty rating for potential Crystal damages, thereby making Orange a best fit.

### Automatic Lane Change

This feature represents perhaps the most complex and dangerous of the three listed. Its invocation will take place at high speed environments with little room and time to operate, thereby allowing for an extremely limited margin of acceptable error. In this environment the risk to human life and safety in the case of failure is very large. Therefore, to reflect this importance I believe that a Crystal Red team would be most adept in implementing this feature. Crystal Red provides ample resources to successfully design, build, and test this feature, and the maximum of eighty people on the team should prove to be enough. Crystal Red also is indicative of the potential risks involved with this feature. If this feature's implementation is not perfect, there is very significant risk to both human safety as well as the success and reputation of the company. Therefore, in this case I believe it would be better to allocate more resources than not enough, to give this feature the best chance at success.

### Horn Honking

This feature, while being important and impacting the safety of the vehicle's occupants, is less dangerous and needed than the other two. I believe this to be the case as one does not encounter situations wherein horn honking is necessary every time they drive. Therefore, I believe it would be best to allocate more resources to the other two features as they are both used more and carry greater safety concerns. I would assign the Horn Honking feature to a Crystal Yellow team. While I do believe that it is less important than the other two features as I've mentioned, it also does play a role in the overall system. I believe that Crystal Yellow's limit of twenty people will adequately address this feature. It is of moderate importance and usage to the product, and therefore I feel that Crystal Yellow's twenty damage rating best reflects this.