UNITED STATES MILITARY ACADEMY

PROJECT 4

CS488: LANG-BASED SIMULATION MODELING

SECTION C1

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Code Changes

To record the number of successful and total trips, and the number of detonated hazards and total hazards I created a new record with type `Completion_Data_Type`. The record simply contains four `Natural` fields corresponding to the information we wish to track. In the `Simulation_State_Type`, I added a new field entitled `Completion_Data` to allow easy access for updates. The logical place to update such information is in the polymorphic procedure `Handle` which operates on `Friend_Movement_Types` because `Handle` checks for hazard collisions and completed trips. So after the check for `Hazard_ID > 0` (a hazard collision occured) and the check to `Friend_Is_Hurt`, we call the convience procedure, `Log_Unsuccessful_Trip` with the current state to increment the number of total trips and the number of detonated hazard. When a trip is complete, we use the convenience procedure `Log_Successful_Trip` to increment the number of successful trips and total trips. Finally, we need to track the total number of hazards, which occurs in `Handle` for `Hazard_Emplacement_Type`. We use the convience procedure `Log_Hazard_Emplacment` to increment the number of total hazards and call this in the opening lines of `Handle`

Impact of Point Estimators on Run Length

Change in the confidence half-interval over the change in number of runs

Why are the number of hazards placed unchanging over independent replications?

How many runs are truly different between 2 runs and 30 runs in the current simulator?