P1

**Time and efficiency play a vital role in air transportation. For normal passenger flights, sections which require a great amount of time include the boarding and disembarking of passengers. Therefore, it's necessary to build a model which provides the best strategy for different types of planes and on various occasions.**

P2

**To begin with, we will introduce the overall boarding process, which is shown in this chart on the slide. While boarding a plane, passengers will first go to their assigned seat, put their luggage on the rack and then get seated. While a passenger is stowing their bags, other travelers who are stuck behind should wait until the passenger finishes the process, which will cause a queue.**

P13-P15

In the first model, we divide the variables into three types. **Constant A,** which is marked as A in this table refer to the constants which will not change in the whole scope. **Constant B** may change in the whole scope but won’t change when it comes to a certain set of passengers and plane types. **Variables** will for different initial sequences of passengers. (the slide change through the speech)

P58

We have concluded some of the strengths of our model.

**First, accuracy. In our model, we take several special situations into consideration. Also, we use several programs to facilitate our calculation**. This makes our result reasonable and precise.

**The second strength is universality**. In our model, **we succeeded in achieving visualization of the plane and successfully simulated the whole process of different boarding methods shown in the video clips just now.** This means that our model can be **applied to a variety of problems.**

**Finally, our model bears efficiency**. As shown in the second model, **we use a program to facilitate our calculations in finding the best strategy.** Therefore**, a lot of time is saved** and it proved that our model has efficiency.

P59

Also, we have found some weaknesses that needed to be improved.

**The first problem is complexity**. We introduce a great many variables and a variety of explanations in our model. **Some of them are a little bit abstract** and some of our calculations conducted by programs aren't shown in this essay. This will **make our model more complex and less easy to understand**.

**The second weakness is that our model is difficult to operate** when it comes to reality. As can be seen in the descriptions above, **our model provides a plan with some details that must be strictly obeyed**. **This will increase the difficulty for the crews to exert this plan. However, we have thought of a method that can ease this difficulty.** **When there’s a passenger ahead waiting, we can first let him get to his seat.** According to our sensitivity analysis, **this will not have a big impact on our boarding time**. Therefore, this kind of strategy is somehow reasonable and **flexible.**

P60

**Based on our model, we write a letter to provide the airline executives with some suggestions**. First, we **point out two important factors** in the whole boarding and disembarking process---- **hommization and efficiency**. **Secondly, we draw a simple chart to illustrate our plan**. **Finally, we offer some simple tips** that could be applied to all kinds of planes. **Airline executives need to prevent passengers from being stuck in general aisles, provide passengers with enough space to place their luggage and prevent queue-jumping.**