**Reviewer 1**

1. Small changes  
  
Section 1  
  
- I suggest to move the last paragraph of Section 3.2 after « [17] », to put together the elements of the definition of encapsulation. Also, your notion of encapsulation, at least as shown in the Class Route code (Section 3.3), seems limited to prohibiting direct write accesses, but not reading ones, of attributes. I'm more used to encapsulation as trying to hide all implementation details, in which case « End. AttackingFleets.Contains(fleet) » would be replaced by something like « End.isAttackedBy(fleet) » to hide the list data structure. Please clarify this here too.  
- I suggest to add a sentence such as « This is why we decided to look for a solution at a lower level of abstraction. » at the end of the paragraph before « To sum up,… ».

**We moved the paragraph as suggested. We changed the reading visibility by adding the method in the example as suggested, so that Planet should contain a method IsAttackedBy which checks if the list of attacking fleets contains the given fleet. We added the sentence as recommended.**  
  
Section 3  
  
- You mention a « spatial index » in Section 3.4. I don't understand what that means.

**We added a remark explaining that a KD-Tree can be used and added a reference where this is employed in a game to lookup a specific unit within a certain range.**  
  
Section 4  
  
- I suggest to rename Section 4.3 « Casanova-level integration ».  
- I suggest to move the first paragraph of Section 5.1 after the first sentence of Section 4.3. This will put together the general traits of Casanova 2.  
- You mention the « synthetic part of the compiler ». I don't understand what « synthetic » means here.

**Changed section title. Moved the paragraph as suggested. Added a footnote explaining the meaning of “synthetic” in our context.**  
  
Section 5  
  
- I don't understand the « Fast «  in Figure 1.

**We added a remark in Section 4.2 (where we first introduce the term) explaining that the implementation of the wakeup list is done with a dictionary, thus the adjective “fast”.**  
  
Section 7  
  
- In Section 7.3.2, Item 3, you state that only the new projectiles are sent, even though the code below sends projs, which includes the whole Projectiles list (I assume that « :: » is list concatenation — please mention this in the text). This remark also applies to Item 4 (you mention « only the information about the projectiles to remove », even though the code seems to behave differently).  
- At the end of this section, it would be interesting to provide some remarks to relate this part with the encapsulation issues addressed in the first half of the paper.

**We added in 7.3.2 a full paragraph where we better explain the semantics of the yield in Casanova and its networking counterpart. This should clarify the behaviour of sending the projectiles. We also added a new paragraph at the end of the whole section explaining the connection between the example and the general discussion about encapsulation.**   
  
Section 8  
  
- You mention that the optimization is « linearly faster ». What does « linear » mean here?  
- I think it would be quite interesting to provide here some data regarding the memory usage of the various versions, since your optimization techniques may have a significant (negative) impact there. This would provide a more balanced view of your optimization strategy.

**We removed linear (indeed it was not clear) and explained that in the case of MonoGame the performance is on the same order of magnitude but still faster. As for the memory usage, we did not analyse it because the memory required to maintain the data structures relative to the optimization is irrelevant with respect to the whole game: indeed modern games usually require GBs of RAM only for the textures (that are only partly stored in VRAM), but they are tightly bound to the CPU/GPU performance, thus the choice of the focus for our evaluation.**  
  
Bibliography  
  
-  Your entries are still not acceptable for publication (see for instance 6, 10, 14,…). You need page and volume numbers, and the editor names for all entries there.

**Fixed the bibliography with volume numbers and pages for journal and proceedings articles. The references without pages are books.**

Typos

**Added a footnote that explains what r.index means**