Admiralty Trilogy Harmonization Process

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Admiralty Trilogy Seminar

Presented by:

Clash of Arms Games

Outline

◆ *Admiralty Trilogy* Harmonization Process

◆ What drove the changes?

◆ Game mechanics

◆ Combat modeling

◆ Generation concept

◆ Annex unification

◆ Conclusions

◆ Questions

Harmonization Process

◆ **Complete unification of game mechanics and combat modeling to ensure conformity between games within the *Admiralty Trilogy* system**

   – All games shared a basic game mechanics structure; several era specific exceptions (e.g. 30 second Engagement Turn in *Harpoon⁴*)

   – Combat models while sharing a similar format had inconsistent basis for physical effects

   – Data annex organization varied between games

◆ **A multi-year effort (2004-2008) to address the issues raised by AT designers and players**

   – Published preliminary models in the Naval SITREP

   – Extensive peer review and game testing

   – *Atlantic Navies* with *Command at Sea* 4th ed first harmonized product

What drove the changes?

◆ **During the development of *Fear God & Dread Nought* and *Dawn of the Rising Sun* combat modeling differences were noted with *Command at Sea***

◆ **Modeling differences had an unforeseen impact on system continuity and would significantly affect products that spanned the timeframe between games**

   – **Biplanes & Battleships (*FG&DN – CaS*)**

   – **Stars & Stripes (*CaS – Harpoon[4]*)**

◆ **Inconsistencies between the three main rule sets**

   – **Game turn length, gunnery, and sensors issues to name but a few**

◆ **Continued difficulties dealing with large scale air battles**

Game Mechanics

◆ **All games now synchronized on 3-minute Tactical Turn**

– Eliminates second air movement phase

– Combat and sensors models tuned to this time interval

◆ **Integrated rules from other modules**

– *Might Midgets*: small boat combat

– *Baltic Area*: mine warfare

– *NSBaF*: coastal defenses

◆ **Ground combat moved to its own supplement**

– Needed the space

– Better alignment with amphibious ops
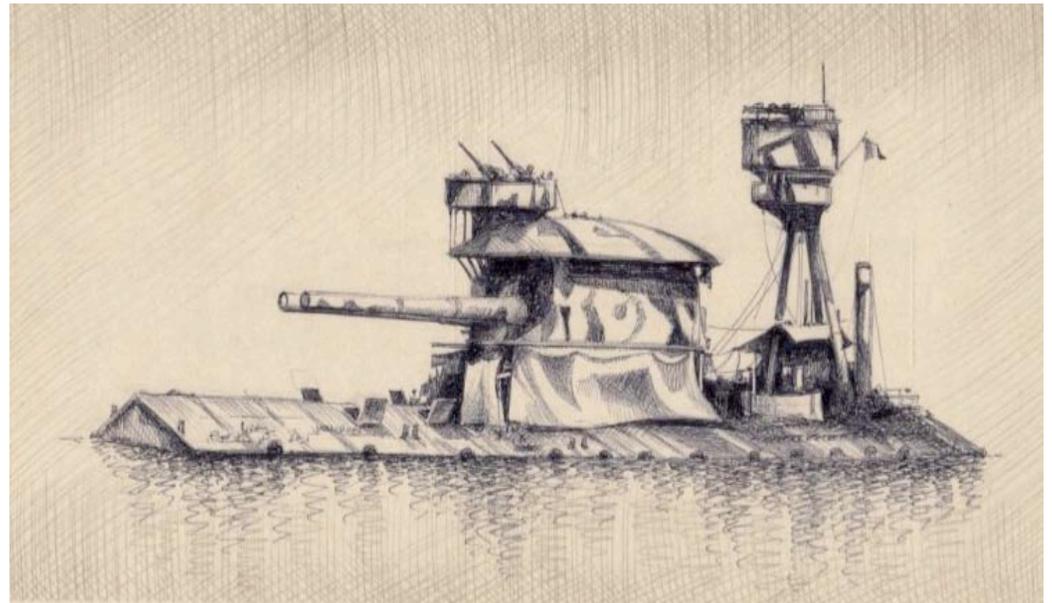
Game Mechanics

◆ **Air combat – most significant changes**

  – **Air – to – air combat now highly abstracted**

  – **Air – to – surface combat based on salvo concept**

  – **Air crew quality a major input to combat resolution**

◆ **Considerable improvement in speed of game play**

  – **Players focus more on force allocation and battle management than maneuvering individual aircraft**

Combat Modeling
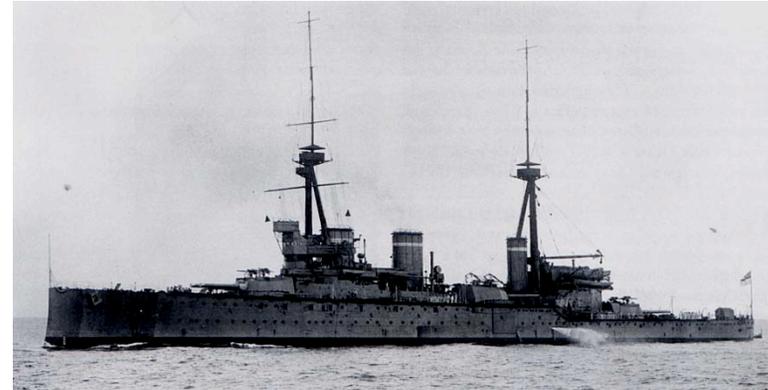
◆ **Gunnery**
  – **Anti-surface gunnery conforms to *Fear God & Dread Nought***
    ● **Gunnery standards now extends to *Harpoon***
    ● **Range band boundaries tied to fire control and armor penetration**
  – **Anti-aircraft gunnery conforms to *Command at Sea* 4th ed**
  – **Small caliber gun model from *Mighty Midgets* now applicable to *Harpoon***

◆ **Coastal defense guns**
  – **Modifier tables conforms with the ship-based gun systems**

Combat Modeling

◆ **Sensor models overhauled**

  – **Radar and ES based on *Harpoon***

   • **Used Computer *Harpoon4* research**

  – **Sonar based on *Harpoon***

  – **Visual based on *Mighty Midgets***

◆ **Electronic Countermeasures**

  – **New model in *CaS* 4ᵗʰ ed**

   • **Jamming and chaff**

   • **Land and sea state clutter**

   • **Extends in to *Harpoon***

◆ **Key to success was expanding the technology generation concept originally used in *Harpoon*[4]**

Combat Modeling

- ◆ **Significant changes in damage effects modeling**
- ◆ **All damage based on the available energy in the explosion and impact of secondary effects**
- ◆ **Weapons damage effects**
  - – Back to first principles – physics (blast, fragmentation, incendiary)
  - – Fundamental approach based on how explosives work
- ◆ **Develop a consistent basis to evaluate weapons**
  - – Smaller set of modeling equations that applies to all weapon types
  - – Take into account technological advances (explosives, fuzing)

Combat Modeling

- **Single damage point equation based on standard displacement**
  - Consolidated the four DP equations into one continuous function
  - Smoothes out the discontinuities between each step
- **Revised critical hit and damage control concept**
  - Critical hit table changed to d20 approach to provide better distribution
  - More variability in fire and flooding critical hits
 - Accounts for stress on DC parties

Generation Concept

◆ **Addresses the very complex problem of differing technology maturity levels between systems**

◆ **Sensors, seekers, countermeasures are rated based on key parameters that identify technology breakpoints**

 – **Radar generations**

 ● **Generation 1: Simple pulsed + A scope**

 ● **Generation 2: Simple pulsed + PPI display**

 ● **Generation 3: Variable simple pulsed + PPI display + MTI**

 ● **Generation 4: Early digital systems +PPI display + DMTI**

 ● **Generation 5: Multifunction systems + digital display + DMTI**

 ● **Generation 6: Active multifunction systems + digital display + DMTI**

◆ **Allows for technology asymmetry, which often display extremely one-sided results**

Annex Unification

◆ **Organizing and labeling all AT data annexes consistently**

  – Reduces confusion on the part of player and designer alike

  – Consistent data format makes information easier to find

◆ **Some annexes may not be in all games, Annex J1-J3 won't be in *Fear God & Dread Nought* as radar wasn't invented yet**

◆ **Seems like a trivial change, but it has proven its worth**
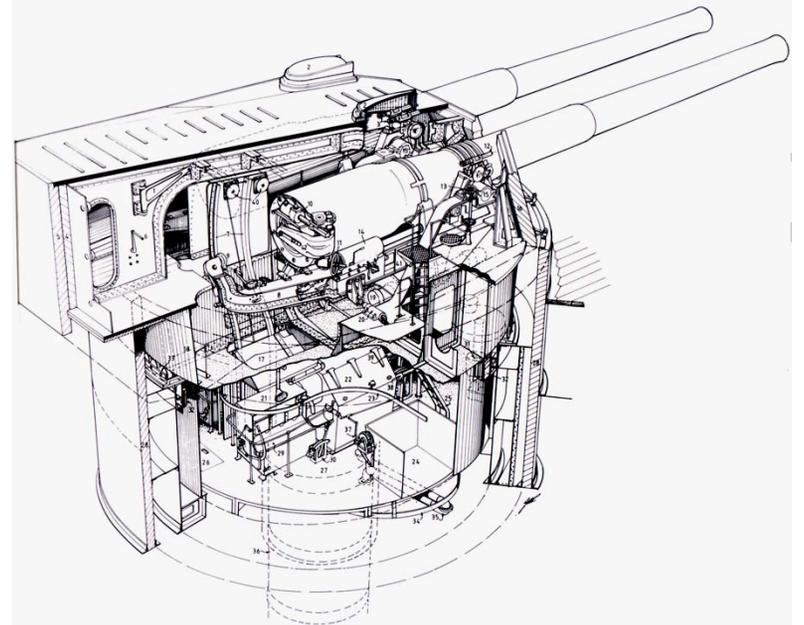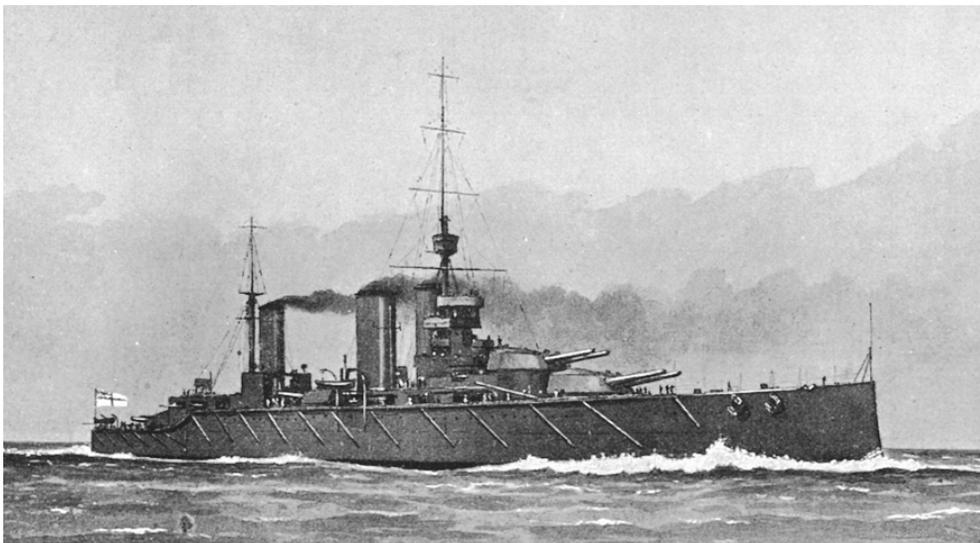
Conclusion

- ◆ **It's been 10 years since *Command at Sea* 3rd ed came out**
  - – Numerous other games have been published
  - – Players and designers noticed inconsistencies between games
  - – Player expressed desired game features they'd like to see
- ◆ **Harmonization process was started in 2004 to address the game mechanic and modeling inconsistencies**
  - – Adjusted game mechanics to eliminate unnecessary exceptions
  - – Adapted or developed new combat models to work across all games
  - – Addressed player desires when possible
- ◆ ***Command at Sea* 4th ed in *Atlantic Navies* is the first fruits of the Harmonization effort**
  - – *Harpoon V* development has begun
  - – *FG&DN* will be modified with the next print run

Questions?