Ships & Sails

Rules

Overview of Setup

One player's computer act as a Server, the other as a Client. See the document ShipsAndSails_ModuleExercise3.pdf for further details.
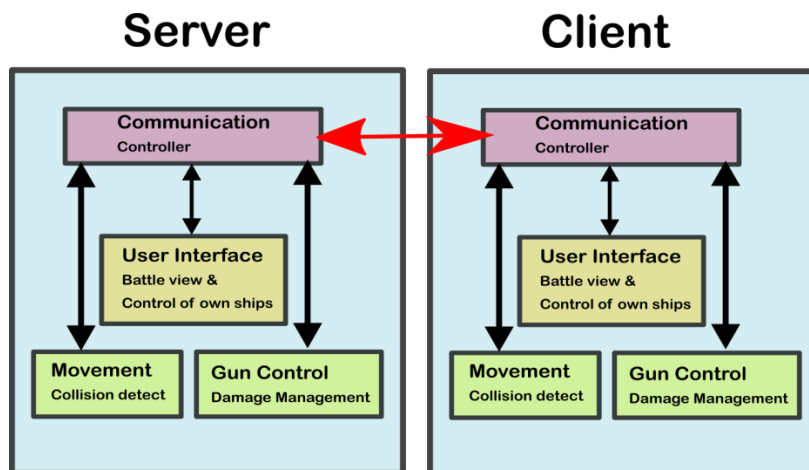

Both the Server and the Client must have a relational database, with at least the information of the participating ships. It can be extended with the actual values as the battle/scenario progress.

Overview of Game

The game is played upon an ocean. It is covered by hexagons (called hexes). The size of the ocean can vary from one battle/scenario to another.

OCEAN
UPPER LEFT CORNER

| | 0,1 | | 0,3 | | 0,5 |
0,0
1,1 1,3 1,5
1,0
3,3
4,0
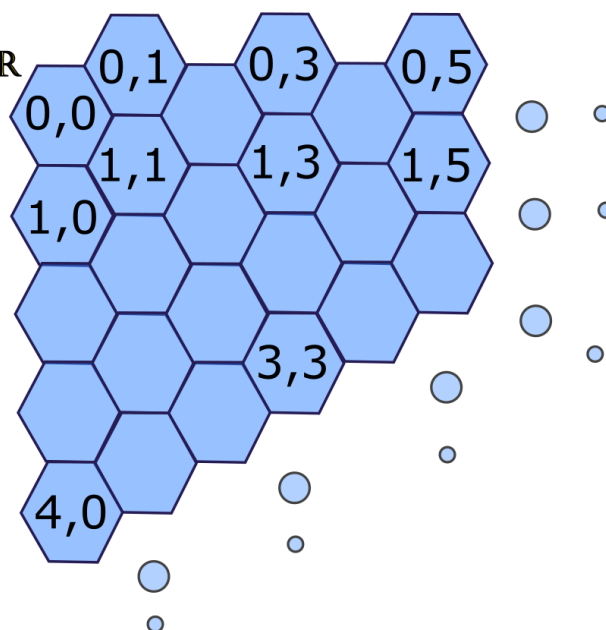
Over the ocean blows a wind. It has a speed and direction. Both will change from time to time, see Direction & Wind p. 6 .

As we all know, it is a fact that earth is flat. See f.ex. Pirates of the Carib- bean.

Figure 1 Side of the earth

So the Ocean is limited in size. And if a ship sails outside this size, it disappears.

The playing pieces are ships (see The Ships. p. 5), which independent of size each can be in one hex. Two or more ships can't coexist in the same hex. If they try, we do have a collision (se p. 12). Ships has (among many other abilities) a speed and direction.

The game is played in turns controlled by the Communication Controller. Each turn consist of the following actions in this exact order :

1. Weather determination (Server only)
2. Transmitting/receiving :
    a. Weather (from Server to Client)
    b. the previous turns actions (moves and attacks).
3. Move module resolve movement damage
4. Attack module resolve attack damage
5. UI shows action
6. UI receives new orders from player
7. Move module set up the next move (check for legality)
8. Attack module set up the next attack (check for legality)

The winner either is :

- the last player with at least one ship floating   or
- the last player with a maneuverable ship   or
- has suffered the least damage after a fixed number of turns.

The Ships.

The basic unit in this game is a wooden sailing ship equipped with a number of guns. A battle (or scenario) consist of a number of ships on either side of the conflict. Each side is represented by a country.

In the game thee are 3 different sizes of ships.

Ships type	# rows of Guns	# of Guns pr. Row	# of Sailors needed	MAX # of Sails	# of Sailors needed	
Brig	1	8	24	4	24	
Ship of the Line	2	16	48	10	60	
Man at War	3	28	84	24	144	

Figure 2 Guns & Sails on Ships

Ships type	# rows of Guns	MAX # of Sailors	MAX Hull	MAX Speed	MAX Speed Change	MAX Sail	# of turns/ turn
Brig	1	60	25	2	1	30	1
Ship of the Line	2	160	60	5	2	60	2
Man at War	3	340	140	4	1	80	1

Figure 3 Hull, Speed & Sailors of Ships

# of Guns pr. row are for both sides of the ship, i.e. half of the number on each side of the ship. 3 men are needed pr. gun to support the reload and firing of them during a battle. The values indicated with MAX are due to change, because of damage.

The Guns

A ship can fire a broadside at either side every second round, if it uses the same ammunition as the previous round.

Shift the kind of ammunition from one to another takes a round extra.

I.e. it can wait for the third or a later round for strategic reasons or because it change the load.

There are 3 different kinds of ammunition :

Cannon ball	Iron balls, which can damage the hull, and in case of a Critical Hit (see p. 16) blow up the whole ship. Short to long range.
Chain	Chains with a minor ball in both ends. They can damage the rigging severely. Average range.
Grape shot	Lot of loose pieces of iron. It can decimate the number of sailors severely. Short range.

Figure 4 Possible damages dependent upon ammunition

Direction & Wind

DIRECTIONS
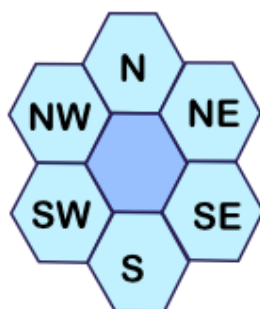
For directional purposes is the indicated notation used. I.e. West and East is not existing.

The wind is defined by a direction and a speed. Each turn/round is the new direction found (circular reference, left is negative change, right is positive):

Wind Direction Dice 1 – 12	Direction change
1	–2 (left)
2, 3	–1 (left)
4, 5, … , 8, 9	none
10, 11	+1 (right)
12	+2 (right)

And a new speed (MIN = 0 and MAX = 8):

Wind Speed Dice 1 – 12	Speed change
1	= 0 (no wind)
2	–2
3, 4	–1
10, 11	+1
12	+2

Movement

The ships movement is limited by the ships type, the wind direction and eventual damage. The movement is controlled by the hexagonal grid. One move is from one hex to one of the three in front of the ship.

The speed of the ship can be from 0 to MAX in the table below. The Speed can never be negative.

Remember to correct for :

- the Wind direction, see Direction & Wind p. 6
- the Hull Damage, see
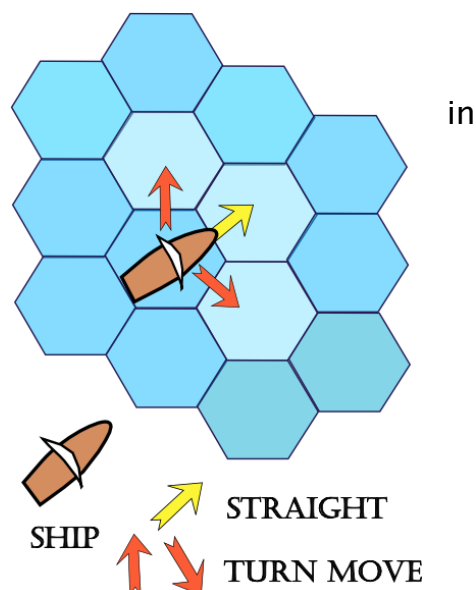
Ships type	MAX Speed	MAX Sail	# of Sailors / Sail	Sail <= 50% ➔ Speed	Sail <= 25% ➔ Speed	Sail <= 10% ➔ Speed	Sail = 0% ➔ Speed
Brig	2	30	6	1	1	1	0
Ship of the Line	5	60	6	3	2	1	0
Man at War	4	80	6	3	2	1	0

Figure 5 Restrictions on MAX Speed Change is the maximal change pr. turn in speed. movement

And note the MAX Speed Change Figure 3 Hull, Speed & Sailors of Ships p. 5 is the maximal change pr. turn in speed.
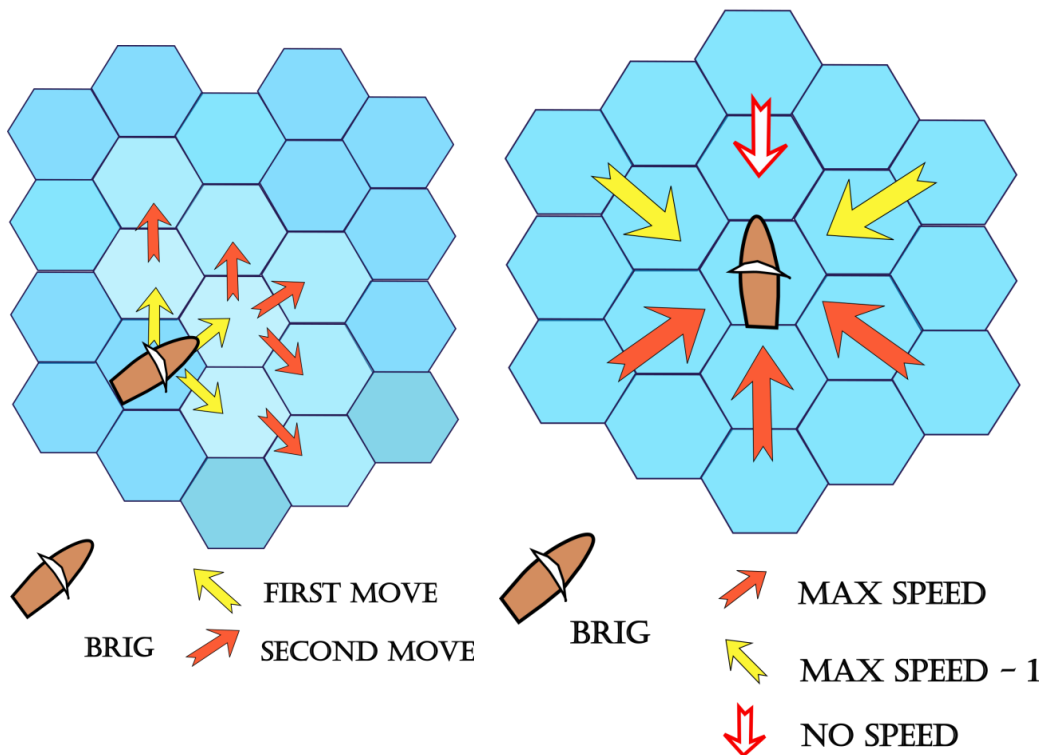
BRIG :

Getty Images/Greg Pease

WIND DIRECTION DEPENDENCY

BRIG

FIRST MOVE

SECOND MOVE

BRIG

MAX SPEED

MAX SPEED – 1

NO SPEED

Ship of the Line

WIND DIRECTION
DEPENDENCY

MAX
MOVEMENT EXAMPLES
MAX 2 TURNINGS
MAX EVERY 2ND TURN

SHIP OF
THE LINE

SHIP OF
THE LINE

MAX SPEED

MAX SPEED – 2

NO SPEED

Man of War

WIND DIRECTION
DEPENDENCY

MAN
AT WAR

MAX MOVEMENT EXAMPLES
MAX 1 TURNINGS

MAN
AT WAR

MAX SPEED

MAX SPEED – 2

NO SPEED
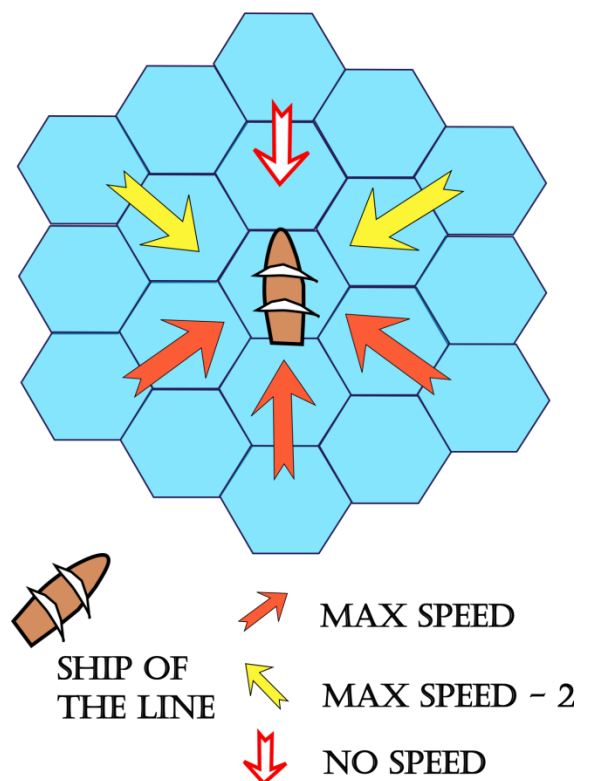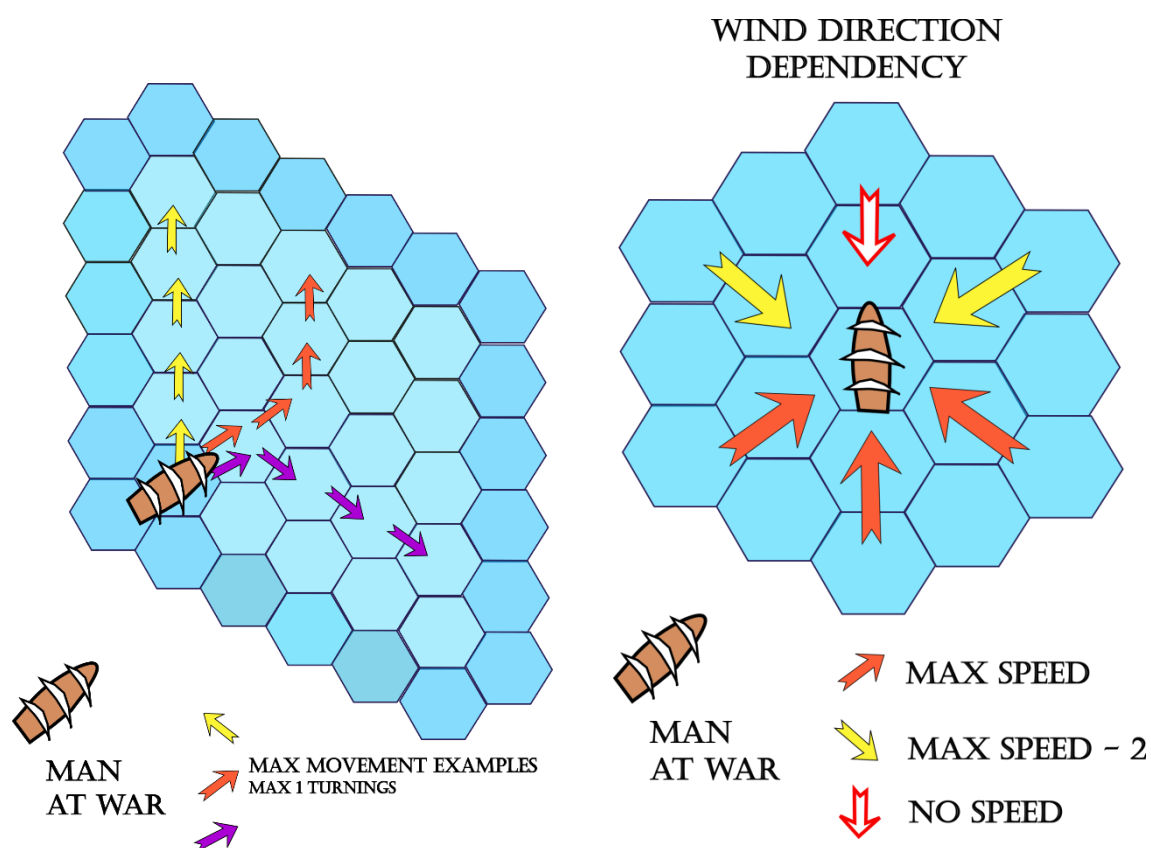
Collisions

Collision happens when two or more ships try to enter the same hex during movement. All ships in a collision has instantly 0 speed and inflict :

Hull damage = 1/3 of actual Hull value of the other ship,   i.e

Actual Hull   =   Previous Actual Hull – Hull Damage

If Actual Hull then is less than or equal to zero, the ships sinks.

If more than two ships are involved, each of them receive damage form all the other ships.

Colliding ships end their turn in the hex, they arrived to the collision hex from. In the rare case, where another ship simultaneously has entered that hex a new battle begin. This continues until one of the ships is sunk, and there is a hex for every remaining ship to be in.

:

Battle

After movement is completed firing a broadside (only every second turn) depends upon :

AIMED HEX

- Type of ship
- # of sailors
- Kind of ammunition

The ship needs 3 Sailors pr. gun. If fewer are available, the firing power will be reduced accordingly.
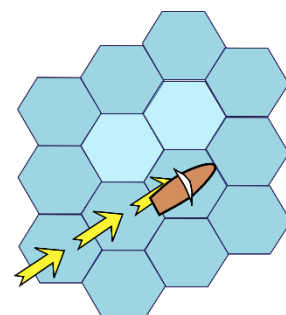
10%

10%   10%

40%

10%   10%
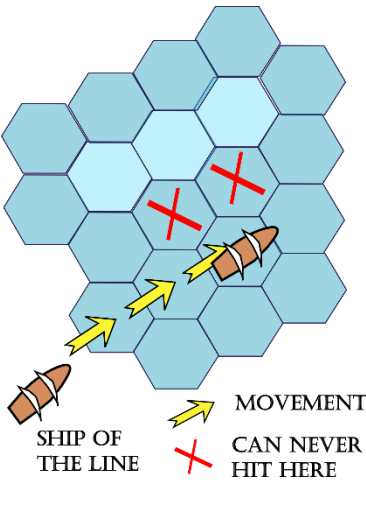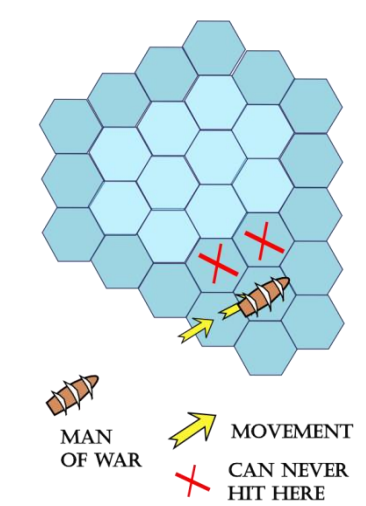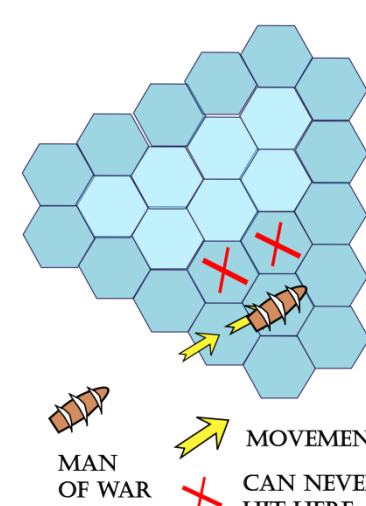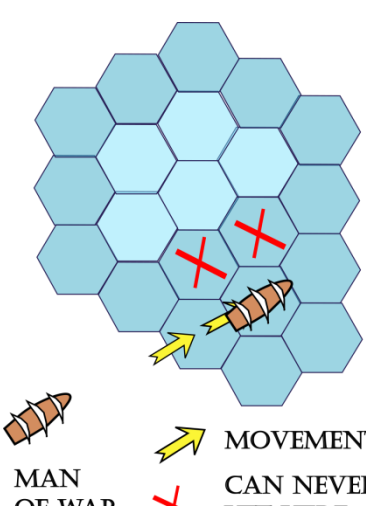
10%

SHIP

Figur 1 Aim at Hex
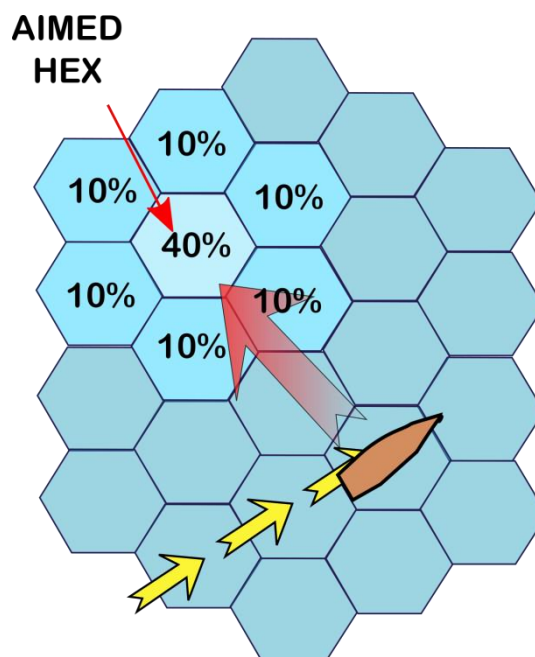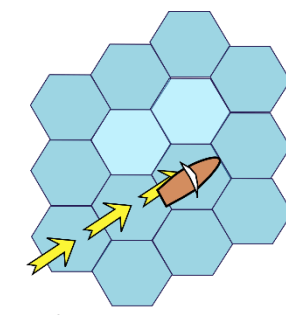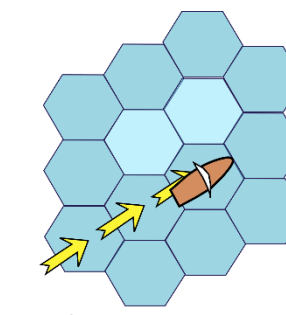
AIMING
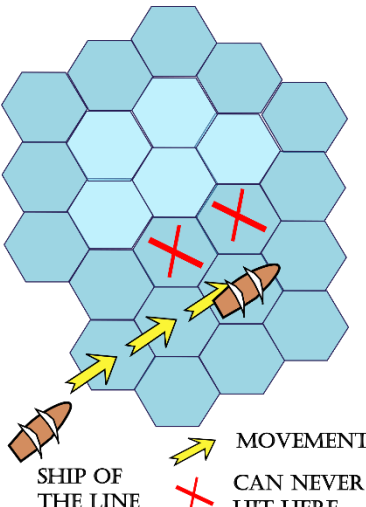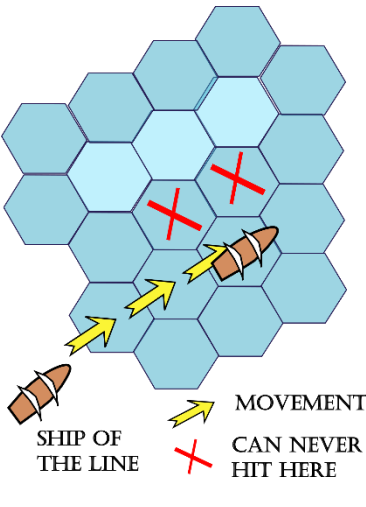
The firing squad can aim at a given legal hex. If the enemy ship passes that hex it checks for damage. If it passes several hexes it checks for every hex.

For dependency of ship type, see p. 16.

Percent	Hit Dice 1 – 10	Damage if hit	Critical Hit
10	1	0.1 * Firing value	– – –
40	1 – 4	0.4 * Firing Value	if Dice == 1 (see)

AIM DEPENDENCIES

HEXES TO AIM AT	Cannon Ball	Chain Shot	Grape Shot
Brig			

Ship of the Line			
Man at War			

Firing value & Battle Example

Firing Vlaue is the actual (remaining) capability of the guns. Example :

1. Man at War.   84 guns   = 28 * 3
2. Broadside   42 guns   = 84 / 2
3. Lost 18 Remaining   33 guns   = 42 – (18 / 2)
4. 33 * 3 Sailors ??   **Firing value** = min(33 ; # of Sailors / 3)

Damage depend upon ammunition. See p. 6.

Let us continue the example. Let's assume, that we have Sailors enough, i.e the Firing Power is 33.

Our ship (the brown one at the bottom of the figure) and the enemy's (the yellow one) has finished their movement. We were so good or just lucky to aim at the hex, where the enemy ended his/her turn.

But first did the enemy enter a 10% hex. We draw a random number [0 ; 1]. The result was 0.33 ➔ so we did not hit it there.

Then the enemy enters a 40% hex. A new random number is drawn. This result is 0,17, well below 0,40 so the enemy ship is hit with :

$$O.4 * Firing\ Power\ =\ 0.4 * 33\ =\ 13.2\ \ Damage$$

NOTE : if the random number was below 0.1 we had a Critical Hit (see p. 16) and must use that table too.
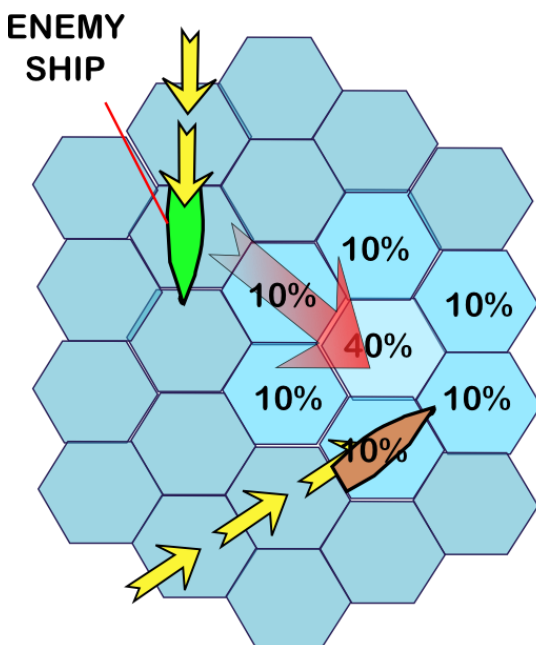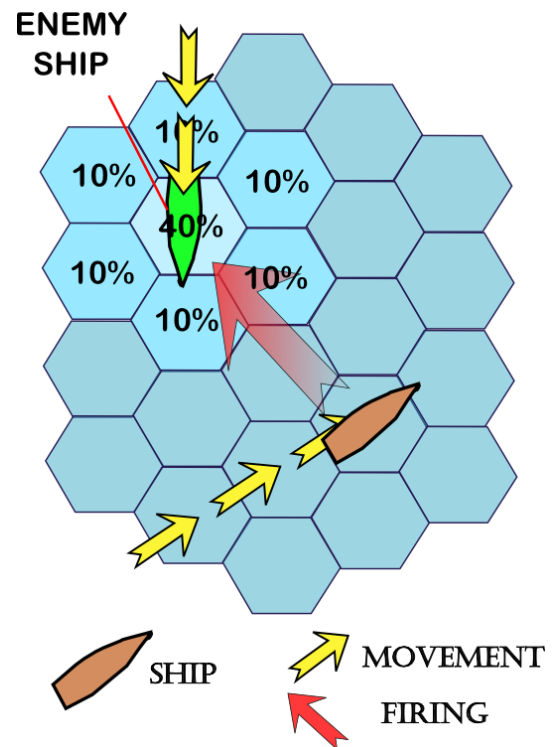
BUT BEFORE the Damage is deducted from the enemy Hull / Rigging / Sailors depending upon your chosen ammunition, the enemy make the same calculation (i.e. simultaneously) . :

The enemy has in this example only a Firing Power of 25, and was not so lucky with the Aim.

Our ship is only hit if the next random number is below 0.1. Let us assume, that we were unlucky. Our Damage is then

0.1 * Firing Power = 0.1 * 25

= 2.5 Damage

Which must be deducted from the attributes of our ship, depending upon the enemys chosen ammunition.

CRITICAL HIT.

If Hit Dice has a range >= 2, then a Hit Dice of 1 generates a Critical Hit, which is performed by a 1 – 20 Hit Dice.

Hit Dice 1 – 20	Cannon Ball	Chain Shot	Grape Shot
1	Ship explodes	All rigging lost (ship breaks 1/turn)	–50% of Sailors
2	Rudder lost (no future turning)	33% of rigging lost	–25% of Sailors
3	–––	–––	–––
4 – 20	–––	–––	–––

Figure 6 Critical Hit Table