Kabam Case Study: Alliances and Attacks

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1 Dataset Location

You can find the dataset at https://kabam.box.com/s/7fgpz6b1m3lwgy2k30nj

2 List of Datasets

Note: All questions regarding the dataset can be sent to rkravitz@kabam.com

All of the data herein comes from the game Kingdoms of Camelot: Battle for the North (KBN), a mobile strategy game made by Kabam. There are three datasets in this zip file besides this readme. These are:

(1) alliance_chat.txt

(2) attacks.txt

(3) user_data.txt

3 Description of Datasets

3.1 Alliance Chat

This file contains alliance chat messages made between 2013/9/25 and 2013/12/18 on three separate english language KBN servers. Each server is a completely different independent entity, although it is possible for a single user to play on multiple servers. Alliance Chat is the principle way in which members of an alliance communicate with each other, although it is not the only way (this other data is not included).

Column Descriptions:

1. senderUserId: this is the unique identifier of the user sending a message; if a user plays on multiple servers, they will have the same user id
2. sendTime: time when message was sent
3. allianceId: unique alliance id where the chat was sent (each alliance has its own private chat room); note that alliance Id's behave differently than user Id's...the same alliance Id on different servers represents completely different alliances
4. comment: the text of the message
5. server: a number identifying the server

3.2 Attacks

This is a log of all attacks which occurred on three separate KBN servers between 2013/10/26 and 2013/12/18.

Column Descriptions:
The first column is unnamed, and is a residual index column that you can ignore.

1. side0XCoord, side0YCoord: the $x-y$ coordinates of the defending player's city; the global map is 800×800, and is flat, not round
2. side0PlayerId: the userId of the defending player; if this value is zero, the attack was PVE
3. side0AllianceId: the AllianceId of the defending player; if this value is zero and side0PlayerId is not zero, then the defending player is not in an alliance
4. side1XCoord, side1YCoord, side1PlayerId, side1AllianceId: corresponding details for the attacking player

5. marchTypeState: the outcome of the battle from the point of view of the attacker (side 1): 0 = lost, 1 = win, 2 = win, but cannot steal gold (did not breach the walls)

6. timestamp: time when attack was initiated

7. side1PlayerLevel: in-game level of attacking player

8. server: a number identifying the server

9. marchReportJSON: semi-structured data about the outcome of the battle, including (a non-exhaustive list)

    - Kid: Knight ID (a knight leads your armies into battle)
    - KLv: Knight level
    - fght: a list of the troops involved in the battle; s0 has the defending army's troops, and s1 has the attacking army's troops; for example

      "fght":{"s0":{"u59":["193",193],"u60":["193",193], "u6":["23", 23, 0]}, ,"s1":{"u2":["500",0,500]}}

      means that the attacker brought in 500 units of type 2, 0 of them survived, and hence 500 died; the defender had 23 units of type 6, of which all 23 survived and 0 died, 193 units of type 59, of which all 193 surived, and 193 units of type 60, of which all 193 survived. Note the different convention for units of type 53 and above, which are strictly defensive units, compared to other attacking units. More info on the troop types is below.
    - rnds: the rounds of battle
    - winner: winner of the battle, should be the same as marchTypeState
    - wall: wall strength of the defender
    - s0/s1 at/def boost: attack and defense boosts enjoyed by the defender/attacker, coming from usage of in-game items (Stone Skin, etc.)
    - loot: resources stolen in battle (should be, in order, gold/food/wood/ore/stone)

3.2.1 Troop Types

"name","unit","might"
Supply Troops, "u1","1"
Supply Wagon, "u2","0"
Light Cavalry, "u4","4"
Militiamen, "u5","4"
Archers, "u6","4"
Swordsmen, "u7","16"
Cavalry, "u8","16"

Supply Cart, "u9","0"
Battering Rams, "u10","24"
Ballistae, "u11","16"
Catapults, "u12","24"
Heavy Cavalry, "u13","24"
Supply Caravan, "u3","0"
War Wagon, "u16","48"
Siege Towers, "u14","48"
Fire Ballistae, "u15","48"
Testudos / Scythe Carts / Fire Catapults, "u17" / "u18" / "u19", the name-troop_id mapping is unknown here. all worth 96 might
Trap, "u53","18"
Trebuchet, "u52","24"
Caltrops, "u54","18"
Wall-Mounted Crossbows, "u55","18"
Boiling Oil, "u56","24"
Spiked Barrier, "u57","24"
Greek Fire, "u58","30"
Persian Sulfur, "u59","30"
Hellfire Thrower, "u60","30"

Starting 12/12, tier 4 troops (Siege Towers, Fire Ballistas, War Wagons) increased in might from 48 to 72, and tier 5 troops (Testudos, Scythe Carts, Fire Catapults) increased in might from 96 to 144; might is a measure of how much value each unit has.

3.3 User Data

Basic data about users (for all servers)

Column Descriptions:

1. userId: id for player (encompassing all servers he/she has played on)
2. cnt_logins: times player has logged in, on all servers
3. date_joined: time when user started playing, on first server
4. cents: amount, in cents, that user has spent in his/her lifetime, on all servers

4 Possible Questions

This is a fairly rich dataset, intended to provide an open-ended set of questions. Here are some possibilities, which you are free to ignore.

1. Attacking in KBN serves one of two purposes. One may attack to farm opponents for resources (in which case the defender opts not to defend at all), and one may also attack as part of "legitimate" war, which often happens under the auspices of alliance-alliance interactions. Can these attacks be distinguished, and do they exhibit different characteristics?

2. Does alliance membership discourage being attacked?

3. Geopolitics of the large alliances on each server are important for dedicated users. Can you say anything about these?

4. KBN is a social game. Is there evidence of a social hierarchy? Do users exert influence on other players? Do certain players induce others to be more engaged?

5. Can you find any interesting relationships between the chat and attack logs? Is chat activity correlated with attack activity? How do alliances organize themselves before attacks? Does an organized and communicating alliance behave differently than a silent one?

6. Location, location, location. Does it matter for alliances and/or attacks?

7. Can you think of a reasonable metric to grade each player's performance? Each alliance's performance?

8. Do the chat logs say anything about which players are happy with the game, and which ones might quit?

9. Is it necessary to spend money in-game to achieve strong performance? You haven't been provided with payment logs, but is there anything which can proxy for that data?

10. Do high-spending users also contribute a lot socially?

11. What other data sets would be interesting to use with this one, and what questions would you attempt to answer?