# Cahier des charges



Version 1 | 2014

# *MagicTactil*

The aim of the project is to create a place where people can play to Magic: The gathering. This permit to the users to play like if they do with the real one. The game will be avaible on Surface, Surface 2, Windows 8 and Android. We have decided to target most of the gamers. Our main goal is to revial the online market of trading cards. Our application will permit the users to not only fight to each other, we want to develop a social network as well. That will create a new community. At the same time, we decided that the player will have the cards by playing to the game or by buying virtual money. Obviously, if he can buy some cards, he can also trade or sell this cards. The specifications explain everything about the choices that the group have done about the technologies, the material, the organisation. And what we need during each phase.

# **Description of the document**

| Title           | 2014 CDC_Magictactil                   |
|-----------------|--|
| Date            | 12/04/2012                             |
| Author          |  |
| Project manager | Periph_a                               |
| Memberships     | Pucheu_m, periph_a, jaber_a, barouk_r, |
|                 | labori_b, farsi_m, jouhri_o            |

1

# **Versionning**

| Date     | Auteur      | Commentaitre                    |
|----------|-------------|---------------------------------|
| 13/04/12 | MagicTactil | End of the first Specifications |
| 27/04/12 | MagicTactil | Grammar                         |
| 14/05/12 | MagicTactil | Presentation                    |
| 15/05/12 | MagicTactil | Add of EDE                      |
| 16/05/12 | MagicTactil | Conclusion                      |

# **Table of contents**

| Description of the document      | 3 |
|----------------------------------|---|
| Versionning                      |   |
| 1 – L'Epitech Innovative Project |   |
| A – What are an EIP and Epitech? |   |
| B – Magic Tactil                 |   |
| 2 – The existing projects.       |   |
| A – List of projects.            |   |
| 1 0                              |   |

# 2014 CDC MagicTatil

| B -Description of the projects which they already exist | 6  |
|---|----|
| 3- Presentation of the phases.                          |    |
| A - Accomplishment phase                                |    |
| B - Material environement                               |    |
| C- Technical architecture                               | 31 |
| D - Security  | 31 |
| 4-Description of the different parts.r.                 |    |
| A – The server  |    |
| B – The Clients   | 32 |
| 5 – Description de la base de données.                  | 33 |
| 6 - The organisation of the project                     | 33 |
| 7 - Conclusion.   |    |
| 8 - Appendix  | 35 |
|   |    |

# 1 – L'Epitech Innovative Project

# A – What are an EIP and Epitech?

Epitech is a school in computer science which a 5 years courses. Epitech is also known for his special education. In fact, this school learn the students to learn by doing projects, sometimes you have to work with workmates. This education want the student to learn some skills, which a senior management have to use. Those skills are, to be independent, taking initiative and handling the time of his team.

While the student is in Epitech, I have to do a project which permit him to get the diploma, this project his

called EIP. Then, at Epitech, the third year's students have to choose a subject which the students will work on for two years. The EIP has to be innovative which is the most important element in the project.

# B – Magic Tactil

Magic Tactil will be a software where the Magic's card gamers will play. This program permit them to have fun with virtual cards and use them like they use it in real life. In fact, the user have the possibility to create his own decks and use them during a game.

Moreover, the community system will also been present, this system will permit the gamers to participate to the life of the community. It will work like a social network, the user can have friends, discuss with them, write on a forum, create or subscribe to different events by using a calendar.

You have to know that 2012 is an important year, in fact, Microsoft is going to come out the new operating system which we guess it's important for the pad's market.

Then our objective is to have the project ready when the market is going to peak.

# 2 – The existing projects

## A – List of projects

Most of the software or websites which they used the theme of Magic: The gathering are not able to peak in the marker for some reasons which we will explain later.

Those programs are: Cockatrice, CCGDECKS.COM, Magic Workstation and Magic the Gathering Online.

# B -Description of the projects which they already exist.

1. Project 1: CCGDECKS.COM

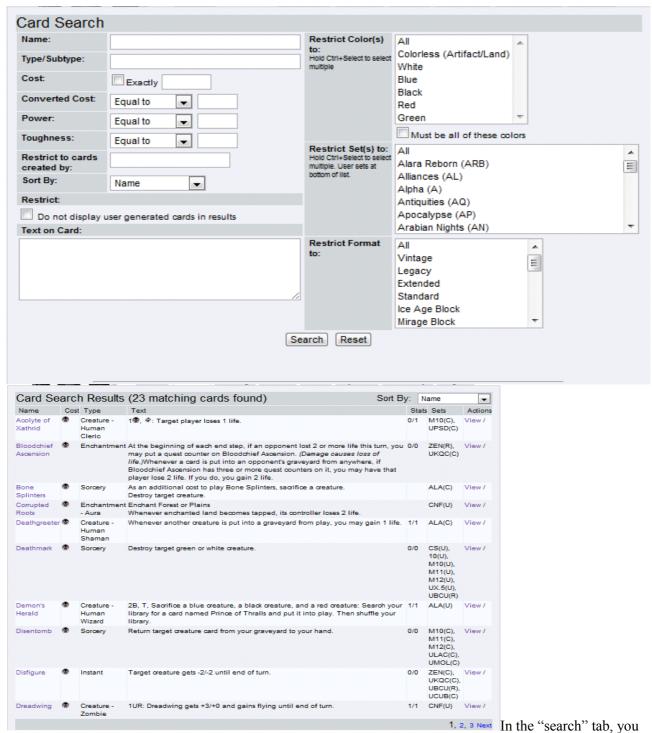
English - # 中国话,汉语:中文 - # 中國話,進語:中文 - Français - Deutsche - Italiano - 日本語 - Português - русский язык - Español



CCGDECKS.COM is PHP website which permit to the users to make drafts or sealed games. The user interface is simple and intuitive. The creators decided to keep the web design simple because they do prefer to keep focusing on the contents. The welcome page show the users the latest news of the website. For example, they could have added a new feature or corrected an old bug.

We can also find some information like, the number of draft's game which is running, the number of people who are waiting or the ranking of the card's prices. Moreover, the home page offer us to translate the contents in twelve languages. Finally, the menu is composed with 8 tabs which are

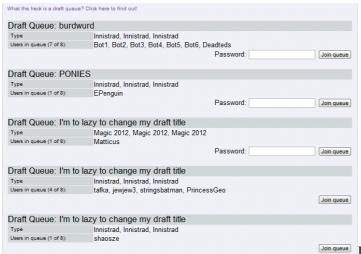
- Home
- Search
- Drafting
- Sealed
- Stats
- My stuff
- Community
- Login/logout



can search a card by some properties like is mana cost, his color or his edition.



. The results is shown by sorting a list, every card of the list have a complete description. You also have a button which permit the user to see the real card.

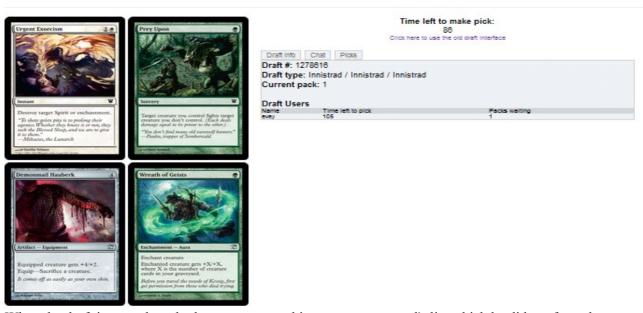


In the drafting tab, it's possible to have the access to he drafting list which are waiting for new players. In fact, this part of the website allow the player to join a game with some other players. For each draft, the most important information are shown, in general those information are: The name, the type of the draft, and the name of the players who are in the game.

The game starts when the person who created the room decide to.



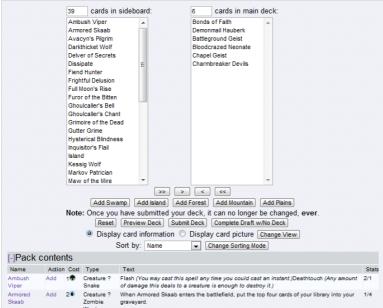
The user also can create his own room with some settings. You can decide: the type of the draft, the number of players, and the optional password. When the room is created, the creator can wait for the maximum number of people who are connected to his room, if he doesn't want to wait for the people he is able to fill the list of player in with some bots. As it said above, the creator can start the game when he wants.



When the draft is started, each player can see on his own screen a card's list which he did get from the

booster. With this list he has to choose a card, after that, the list goes to the next player. Sometimes you have to wait for the others players because they don't know which card they should pick, but anyway the process is very simple and works well.

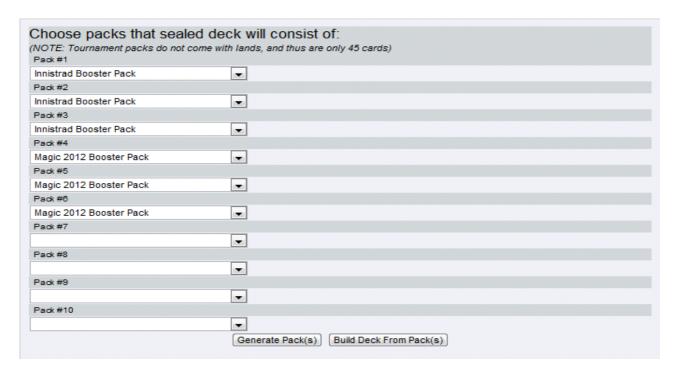
At the bottom of the page, there is a place where the users can see the information about the draft. A discussion area was also implemented.



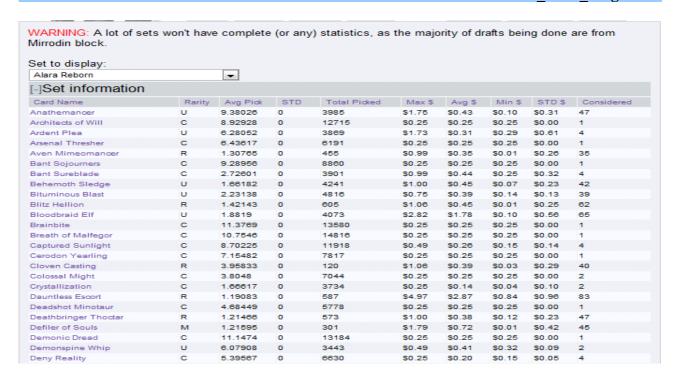
When all the cards were chosen, you are

now in the "making deck" phase. Which means that each players has to make his own deck from the 45 cards he did get from the draft.

The user can also show to the other player is deck or keep playing without building his deck.



The page of the sealed allow the users to open 1 to 10 boosters to make a deck with the cards you did get from the boosters. He can choose the boosters from all editions. The making deck phase is the same as the making deck phase in drafting mode. During a sealed, it's possible to see the list of the cards you got in the boosters without making a deck.



On the stats page, it's possible to find some information sorting by edition and cards. You can also find the average price, the number of time you got the card in a booster for the linked edition.

## **MY STUFF**



The tab "My stuff" allows the user to have a description of each deck and card he did have and used. With a special feature, the gamer can also create a new deck with the cards he did get from his games.

#### **COMMUNITY**

The "Community" tab allows the user to go to the forum of the website. On this part of the website, he can discuss with the others players. In general, the subject of those topics is Magic: The gathering.

- Intuitive
- Simple and clear
- Fast
- All the features

## **DISADVANTAGES**:

- The translation are not good
- Error pages
- You can't check if the deck you have just made is good or not

## **CONCLUSION:**

CCGDECKS.COM is website with a lot of features which a Magic player will find good. Anyway, our project will use all of those features and add an important one which allows the player to check if his deck is good or not.

Magic Workstation is a software which allows the users to make his own deck of Magic: The gathering. This program is not intuitive and hard to use. The first time, a person uses it, a list of cards is shown. You have 2 columns, the first one which is the list of the cards, and the second which is the illustration of the card selected.

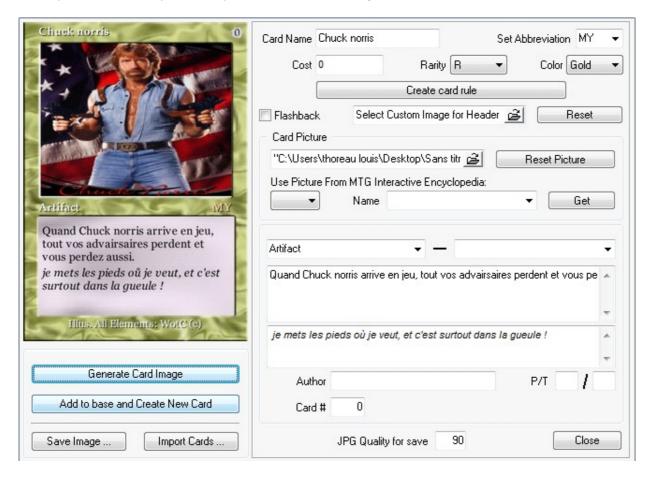


MWS have many features like:

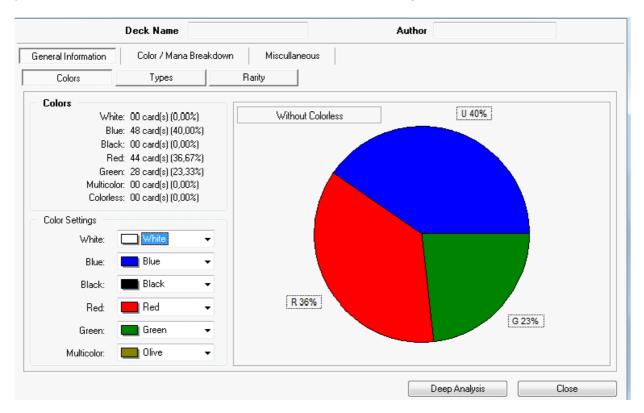
- Making a card.
- Making a deck
- Playing to the game

With Magic Workstation, you can make your own card without any restriction! This feature permit the user to set every property of the card. But the software doesn't allow you to make your own card with the new system which the company Wizard of the coast did create. For example, you can't have a card a phyrexian mana.

When you have created your card, you can use it in classic game or whatever.

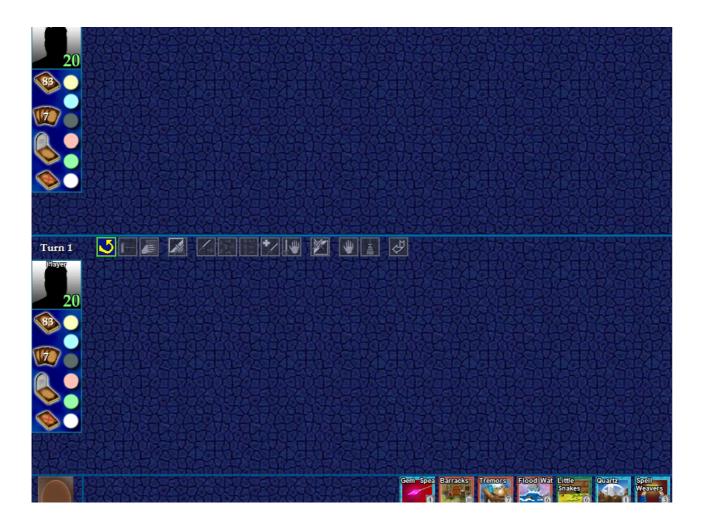


In this part of the software, you can make a deck with the cards you did imported or created. Many features can be used there. When the deck is made, you can have some stats about your deck. For example you can know the number of cards with the same color or the average mana's cost.



If you want to, you can get the buyable version of Magic Workstation which means that you are allowed to use some features. For example you can have an average price of your deck. Anyway we did have the trial version for this document then we didn't try it.

This is a classical game of Magic using the software Magic Workstation, if you want to play to a classical game against another player or a bot, you have to use the deck you did make. With this program every player can manage his cards like he wants to. But the aim of this freedom is to play like you are going to play face to face. Obviously, if it's the opponent turn you can do whatever you want to but he wouldn't play with you anymore because of your behavior.





There is a chat on the right of the screen play which permit both players to discuss to each other while they are playing. The chat does announce the name each phase of one turn.

# **ADVANTAGES:**

- Making a card
- Making a deck
- You can play against bots or real players

# **DISADVANTAGES:**

- Not intuitive
- You have to pay
- A lot downloads (Card, languages, extensions)
- There are few people who using this program to play to Magic: The Gathering

# **CONCLUSION**

Magic Workstation is good tool for the players who are experimented, but it is still difficult to use it if you are a novice at this game. Our project will have a better way to play.

# 3. Project 3: Magic The Gathering Online

Magic The Gathering online is game which were developed by the main company, Wizards of the Coast. For some reasons, this is the best way to play to Magic online. Even if, this is the best way to play there is some disadvantages which don't attract the people to use it.

As a good online game, Magic The Gathering Online has a log-in screen when you launch the game :



You can get an account only if you buy it on the official website. This software costs 10\$, it still a moderate cost for this kind of high quality game. But we will talk about the commercial aspect of this game later.

The software has all the features needed to play properly. For example, you can buy cards, making a deck, exchange cards and using your decks into a classical game.

## Features of the game

- Game's screen.
- Cards shop.
- Making your own decks

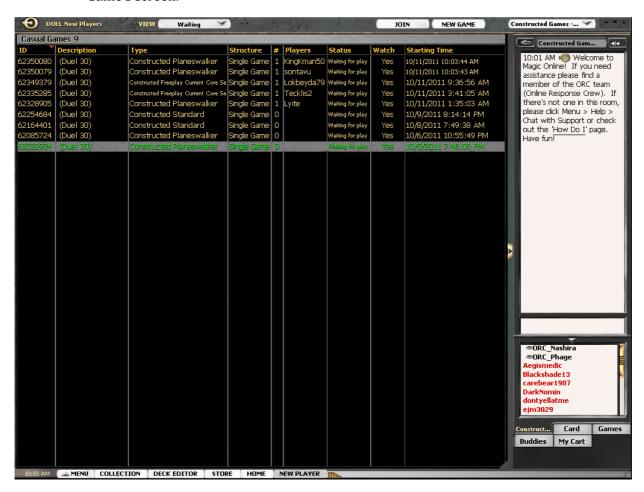
The making deck's screen allow the player to create his own list of cards from the cards the player did get. The interface is simple and useful at the same time. But there is still some ergonomics issues.

We will write down the advantages and the disadvantages:

- Advantages :
- The number of the same card you did have
- The interface is intuitive and how the software sorts the cards from the library
  - Disadvantages:
- The interface can't permit the user to see the whole list by showing the real appearance of each card.



• Game's screen.



When you arrived on the Game's Screen, the user can choose a room which are separate in two types. The first is "Casual Play" and the second one is "Tournament". If you want to play with this game, the whole players have to respect the rules that Wizards of the coasts did create.

When you have chosen a room, you can see the whole decks you have made. On the above screen shot, we can see that the players are waiting for others players, if you want to you can join a room as a spectator.

During the game, each you play a card the software ask the opponent if he wants to do something against him, because of that, the players can get bored of this. Anyway, there is no rule issues because the software manage this.

The card's shop.

The shop is the part of the game which is the most criticized. As we can see on the below screen-shot, the prices of the virtual cards are the same as the cards in the real life. In real life, if you want to check if your decks work well you can play with the printed cards. In this case, you have to buy it before checking.



The shop is easy to use because the software did sort the products well. There is still a disadvantage because of the way of buying products. In fact, you have to write down each information each time you want to buy something.

#### Conclusion

Magic The Gathering Online is a good software and easy to use. Because of the rules which are handled by the software, the player doesn't have to take care if his opponent cheats or not. But there is a problem, in fact everything is buyable and the price are the same as in the real life. Then a minority will be interested in.

## 4. Project 4 : Cockatrice

Cockatrice is a software developed in C++ which gives the user all the tools needed to play to Magic properly.

We can found the following features:

- Making his own decks.
- Handle the room
- Creating a room
- All players can play to Magic like they play in the real life
- Creating and editing the accounts and profiles.
- Community system

#### Making Decks.

This is the Making Deck's interface of the software Cockatrice.



This interface is easy to use for some reasons. First of all, if you want to get the whole available cards of the game, you have to download the database.

When you did download the whole cards, you can notice that the creation interface is separated in 6 parts.

The first one is used to choose the card. When you have clicked on the card the second part starts to work.

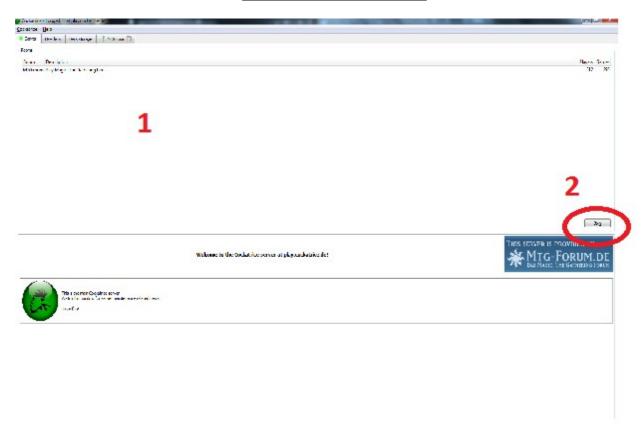
The second part show the user how the card looks like in real life. As the second, the third part gives you a description of the chosen card.

The forth part is very important for creating the list. In fact, there are some buttons which are going to modify the deck. For example you can use some features like: add or remove a card.

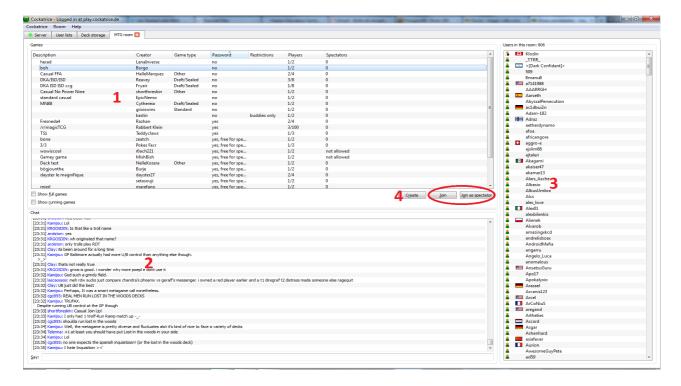
In part five, you can see the list of the cards in your deck.

The part six is used to comment his own deck and give it a name.

# How Cockatrice handles rooms



In the screen-shot above, you can choose the server where you want to play, you can find those server's name in place one. When you have decided where you want to play you can connect to the chosen server by clicking on the button on the part two.



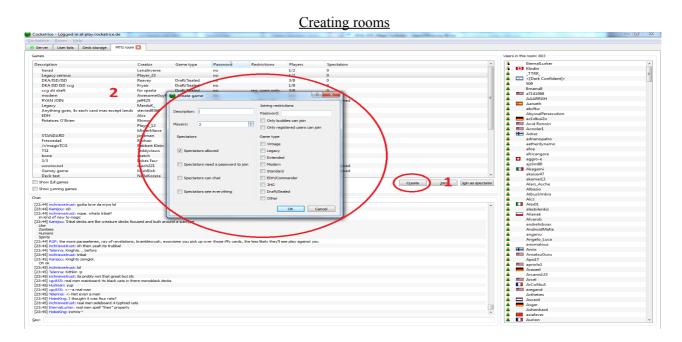
On the above screen-shot, there are six separated parts.

The first one is the list of the rooms created by other players.

The second one is where people can discuss together.

The third one is list of players who are connected on the server.

The forth represent the actions that you can do on a room. For example you can join the room as a player or a spectator.



If the user wants to create a new room, he has to click on the create button which is placed on the first area on the above screen-shot. When you did click a windows appears on the second part. There are all the information needed by the server to create a game.

## Choose his deck for the game



When the room is created, the software bring the player to another interface. On this screen, there are three important elements which are the button to choose his deck, the chat and the state of the player

If you want to choose a deck you have to pushed one of those buttons, "Load local deck" or "Load deck from server", Cockatrice offers the right to save his decks on a server. Which means that the player can use his deck even if he doesn't use his own computer.



For the example, we are going to choose the local load, if you want to choose a deck online. The process is exactly the same.

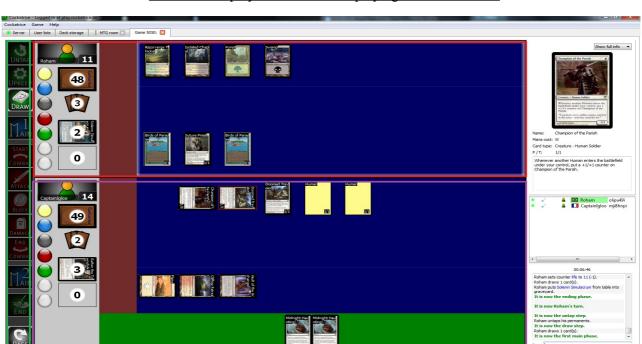
When the button is pushed, a new window appears. You can find this window on position three on the above screen-shot.

When you did have chosen your deck, the window disappears, then you can see the whole list sorted by types of card. This list is shown on position two.

If you want to use the deck, you have to push "Ready to start". You can find it on position one.

If you are ready to play, the software changes your state on position four. You can have only two states, the first one is not ready defined by the red cross and the second one is ready defined by the green arrow.

When both players are ready, you can start the game.



# What can the player do when he is playing with Cockatrice

The above screen-shot shows the interface of a game with Cockatrice. As you can see, we can distinguish three areas.

The first one which is circled by a red line, is the opponent's side.

The second one which is below the first one is your side. We can notice that a space is for the hand of the player. This space is in the green area.

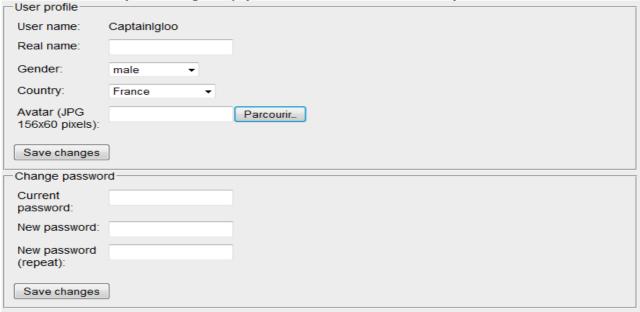
The third area represent the different steps in one single turn.

When you are playing to Magic: The Gathering, you usually use the cards which are on your side. For this reason, Cockatrice gives to the people freedom of what they are doing with their cards. But you can also play on the other side, if you want to do that, there is only one way. In fact, you can give your card to your oppenent by moving a card from your side to the opponent's side.

Community system.

If you want to play on the server of Cockatrice, you have to sign up on the Cockatrice's website which is

cockatrice.de. When you have signed up, you can set new information about you.

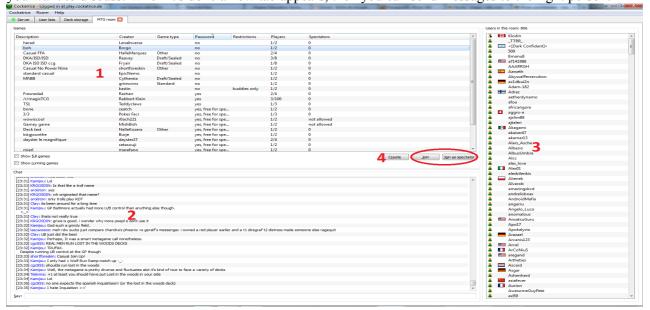


The above screen-shot show us what is the account's information you can set.

If you want to see the information of other players you can get it by clicking on "User details" on the Cockatrice

The communication is very basic, in fact you can discuss with the others by using the chat on position two.

But you can also have a private discussion with one person by clicking on "Direct Chat" on the person with you want to discuss. When it's done a new tab appears, then you can send messages to the right person.



# Conclusion

Cockatrice is a software which is full of good features but only for the game part. In fact, the software has all the features needed for a pleasurable game.

But the community system doesn't have good features. That is the most important detail that we will include in our project.

Moreover, we want the users to participate as a member of big family by using our software and not only playing games online.

C – Main websites of the projects which already existing.

Those URL are the main websites of each projects we did talk about.:

CCGDECKS.COM → <a href="http://ccgdecks.com/">http://ccgdecks.com/</a>

Magic Workstation → http://www.magicworkstation.com/

Cockatrice → http://cockatrice.de/

Magic The Gathering Online → <a href="http://www.wizards.com/Magic/Digital/MagicOnline.aspx">http://www.wizards.com/Magic/Digital/MagicOnline.aspx</a>

## 3- Presentation of the phases

In this part, we are going to talk about the general phases of the project. Then we will remind you what is our project. MagicTactil is a group which permit to the users to play to the game called Magic: The gathering. In addition to this, they will have the access to a group of social features which permit the player to be a member of the community.

#### A - Accomplishment phase.

Firstly, we are going to talk about the tools we will use in the aim to sell the project.

The main software is going to word on the Android and Microsoft products.

Then, the group will use a Microsoft programming tool called Visual Studio 2010. This tool permit the developpers to access to the whole Microsoft technology like the language C#, APS.NET or ADO.NET.

The program is going to work on pads as well. If we want the program working on a Microsoft pad, we need to use a SDK for this kind of software. This tool is called SDK Surface 2.

For the Android part, the Android's developpers are going to use the language Java with the right Integrated Development Environment like Eclipse.

#### B - Material environement.

During the project, the need of material is different between all the phases. Then we split it in 3 phases which are, programming phase, production phase and the demonstration phase.

## 3.B.1 - Programming phase.

During this phase, the need of material is not very important. In fact, we only need the tools which we are going to use. Even if, the project will work on pads, we do not need this at that time because of the SDK which will emulate the pad.

#### 3.B.2 - Production Phase.

When the project is done, the need will probably change. In fact, the goal of this project is to sell the group of softwares to the main company maintain Magic: The Gathering.

The cost of the material for the users is nonexistant. In fact, the most expensive material the owner will buy is the servers. Moreover, they will need to employ someone to maintain them.

#### 3.B.3 Demonstration Phase

This phase will start when the Programming Phase and the sell of the project. The aim of this phase is to present our product. In fact, we need the Microsoft and Android pads if we want to present the project like we want to.

# C- Technical architecture

The different element of our solution are:

- The servers.
- The clients.
- The Web site.
- The Data Base.

The appendix 2 is a flux diagramming between all the elements.

First of all, the 'Data base' and the 'server' are independent. In fact, the 'server' is an intermediary between the Client A, Client B and the Data Base. The Server is able to communicate with more than one clients at the same time and to edit the Data Base. The Server is going to be a Data interpreter.

The Data Base will be able to edit the datas with the information it will get by the Client.

During the Programming Phase, the web site will be the element for the communication. His first goal is to broadcast the information. Moreover, it will have a link with the Data Base because of the subscribe feature's.

Finally, the whole kind of clients is symbolize by Client A and Client B and they will have a link with the Server.

# D - Security handler.

If we lost the Data Base, a back-up will be done weekly in the aim to prevent those kind of issues.

In fact, the group is going to use the technologies from .NET for the server part, that means we will use a lot of services from .NET and the Common Languages Runtime.

With that we will get a lot of classes and services useful for the programmers in the aim to write a safe program. Those classes and services permit the system admnistratr to customise the access to the protected datas.

## 4 - Description of the different parts.

The general architecture of the project is split in two parts which are the server and the whole kind of client.

#### A - The server

The features of the server are:

- To be an intermediary between the clients and the database.
- To be an intermediary between two or more clients.
- To manage a room.
- To add or delete someone from your friend or black list.\
- To discuss with other players by private message or channels.
- The profil of a player is a group of information about him. The owner of the account will have the right to change those information. Moreover, I will able to look at the profil of the others.
- A shop system will be available, with this system the users will be able to buy some cards with a virtual money.
  - Creating a game with special rules like drafts or emperor.
- When you are in the room or channels, if you are administrator, you will have the right to kick another user if he does not respect the rules.
- When you are playing to Magic, you can use the cards as you want to. That means you can put a card on every area on your side.
- While you are playing, the user is able to change some settings like the number of the tokens on your side.
- If a player wants to watch a game, he will be able to connect to the game with the spectactor mode which means. He will be in the game as the others but without some features, like putting a card in another place.
- The user can create his own deck with the cards he owns. He will be able to add or delete some cards from his deck
- The user can create his own wish list with the cards he owns or does not own. He will be able to add or delete some cards from his deck.
  - The player can watch the whole cards of the game.

Those features are the actions which the clients will do, but those commands are treated by the server.

#### B – The clients

The different clients are going to work like the server, that means the client will read into the datas. In fact, those are going to receive some information from the server. Those information will be treated and the client will behave as we want to.

#### 5 – Description of the database

The database is an important element in our project. In fact, this element will contain all the

information about the users.

We can find those following information:

- Personal information: Name, Surename, birthday, the place you live, age, banking information (if he wants to buy some cards or virtual money), pseudo.
- Social information : Friend list, Black list.
- Gaming information: The cards the player owns, the decks the player owns, the cards the player wants to get, history of his games.
- Information about the events: History of his subscription

#### 6 - The organisation of the project.

We decided to use a special kind of organisation called adhocratic. In fact, everyone has a special skill and everyone is going to have a task which need only one kind of skill. The aim is to create little teams and each team will work on a special part of the project (Appendix 1). The project manager is independent. The same person will manage the budget and coordinate all of the teams. He has to define the most important goals between all of the teams and dont forget business strategy.

In fact, our project contain more than three kind of technologies that we will use, then, this kind of organisation is suitable for our situation.

The project is splitted in three groups which are:

- Windows Client.
- Android client.
- Server

You can see the planning on the appendix called 2014\_Gant\_MagicTactil.pdf. We decided to start by discovering the new technologies.

I am going to explain how we decided to split the mates into different teams. In fact, we wanted to the people has to work on a technology he likes or he wants to learn.

Because of that, we are now three for the Windows Client and the Android Client and two on the server. Something was important when we made the teams, in fact, some people does not know how the game works. Because of that those people could not have chosen to work on the Client part.

Even if the size of the team are quite small, we want to keep that way of working. In each team there is Chef who is going to work on the project like another one and he has to handle his team at the same time.

Communication is also very important in a group, in fact, we decided to use a tool called Asana which is a project handler. We decided to use this tool for two reasons. The first one is that we can keep talking to each other even if we are split all over the world. The second one is that we can create goals and the whole groupe know what he has to do and especially when he has to finish the task.

Moreover, we will meet every two weeks to talk about the project and new ideas. At the end of each meeting an order will be made.

 $\frac{4-Conclusion}{\text{A--Comparative matrix between our project and the others.}}$ 

|   | Magic Tactil | Cockatrice | Ccgdecks.com | MagicWorkstation | Magic Online |
|---|--------------|------------|--------------|------------------|--------------|
| Making decks  | X            | X          | X            | X                | X            |
| Can choose real cards   | X            | X          | X            |                  | X            |
| All the needed features to play                                   | X            | X          | X            | X                | X            |
| Profil  | X            | X          | X            | X                | X            |
| Friends list  | X            | X          | X            | X                | X            |
| Forum   | X            |            |              |                  |              |
| Room  | X            | X          | X            | X                | X            |
| Handling events   | X            |            |              |                  |              |
| Trading cards   | X            |            |              |                  | X            |
| Can play to<br>different types<br>of game (draft,<br>sealed, etc) | X            | X          | X            | X                | X            |

# B – A SWOT about our project.

| Strength    | <ul><li>Short time to develop because of the language we will use.</li><li>The community</li><li>The community system.</li></ul> |
|-------------|--|
| Weaknesses  |  |
| Opportunity | - Other software don't have regular updates - No threat from the rivals  |
| Threat      |  |

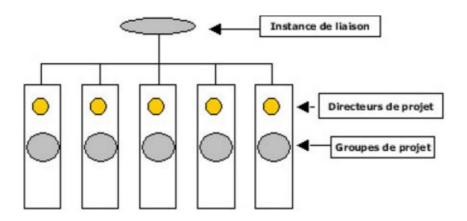
# <u>C</u> – Our project and the others.

At the moment there is any rivals for this project because of one game called Magic The Gathering Online. In fact, those kind of games got a bad reputation because the main company did want to sell the virtual cards to the same price as the real cards plus the price of the software. Even if the idea was great the business model didn't fit with the needed of the customers.

After that failure, some free software came out. But those programs doesn't have a large community and a good community system. This is the most important part of our project.

# 8 – Appendix

- Appendix 1 : Adhocratic structure.



- Annexe 2 : Flux diagramming of MagicTactil .

