

GTA Online Spy Satellite DLC – Component View – Hacker Services – Hacking – Vehicle Hacking Aerial Drone

1



Hypothetical DLC concept created for GTA Online. Concept is titled *GTAOnline Spy Satellite DLC*.

Concept presented in this document is a Vehicle Hacking Aerial Drone. A service provided by the spy satellite's Hacker Services.

- LinkedIn profile link: <https://www.linkedin.com/in/edorejel/>
- Concept creator: Ed Orejel, MSCS

Watermarkly

Brief Disclaimer

This software development project is a sample presentation for interview purposes.

To understand the contents of this presentation, please view the media on my LinkedIn page titled *GTA Online Spy Satellite DLC - Software Development Project - Latest Update!!*

The system for the Vehicle Hacking Aerial Drone is currently being designed from a top-level conceptual view.

The colors and shapes used in the presentation do not hold significance. The shapes are aligning with software development flowchart standards.

If you see an image of a concept from the video game called GTA Online, it is safe to assume that Rockstar Games owns the concept presented in the image. I am only using concepts from GTA Online to help illustrate some of the concepts found in this presentation. Any other images used to explain the concept in this presentation are owned by their respective owners.

I am the sole developer of this DLC concept. Please do not distribute this presentation.

Thank you.

Sincerely,

Ed Orejel, MSCS

Vision Statement

3

Car Hacking Drone



I am currently deconstructing (learning) GTA Online's Targeting and Explosion System to adapt it to some components found in the *GTA Online Spy Satellite DLC*.

In this presentation, I will focus on the Vehicle Hacking Aerial Drone that is part of the *GTA Online Spy Satellite DLC*. The vehicle hacking aerial drone will have the following abilities:

- Identify and hack every vehicle, aircraft, and watercraft type.
- Full remote control of every vehicle, aircraft, and watercraft type.
- Owner's vehicle, aircraft or watercraft type can also be hacked and controlled remotely using the drone.
- Vehicle Hacking Aerial Drone will be able to identify the vehicle of a player, using the player's in-game cell phone.

Shadow Hacker Group



A key assumption about GTA Online is that all weapon systems must know when a player is not inside and not out of reach of the weapons. The vehicle hacking aerial drone will use GTA Online's Targeting and Homing System to hack and control player vehicles so that the players will be able to drive vehicles using a drone.

The players in GTA Online will also be able to hack and remotely control their own vehicles using the vehicle hacking aerial drone. With the aid of a vehicle hacking aerial drone, players will have the ability to turn all vehicles in San Andreas into Ghost vehicles. There are many definitions of "ghost vehicle". For this presentation, "ghost vehicles" are vehicles that drive themselves without a driver sitting in the driver's seat.

GTA Online's Targeting and Homing System and the Vehicle Hacking Aerial Drone System are being deconstructed and designed only from the user's perspective. I am not looking at any actual C++ code or other type of code that belongs to Rockstar Games.

Thank you.

Expanding on Vision Statement – Rationale for the New Addition to GTA Online

4

Car Hacking Drone



Shadow Hacker Group



Image #1: Vehicle Hacker



All vehicles in San Andreas have computers inside of them. The computers range in ability and are designed to make the vehicle function, when a driver or operator attempts to use the vehicle. The vehicles' computers emit various signals when the vehicle is in operation or when the vehicle has power. All vehicles in San Andreas are assumed to always have power and gas to start the engine. The Shadow Hacker Group will exploit the signals being emitted from the computers of all the vehicles in San Andreas.

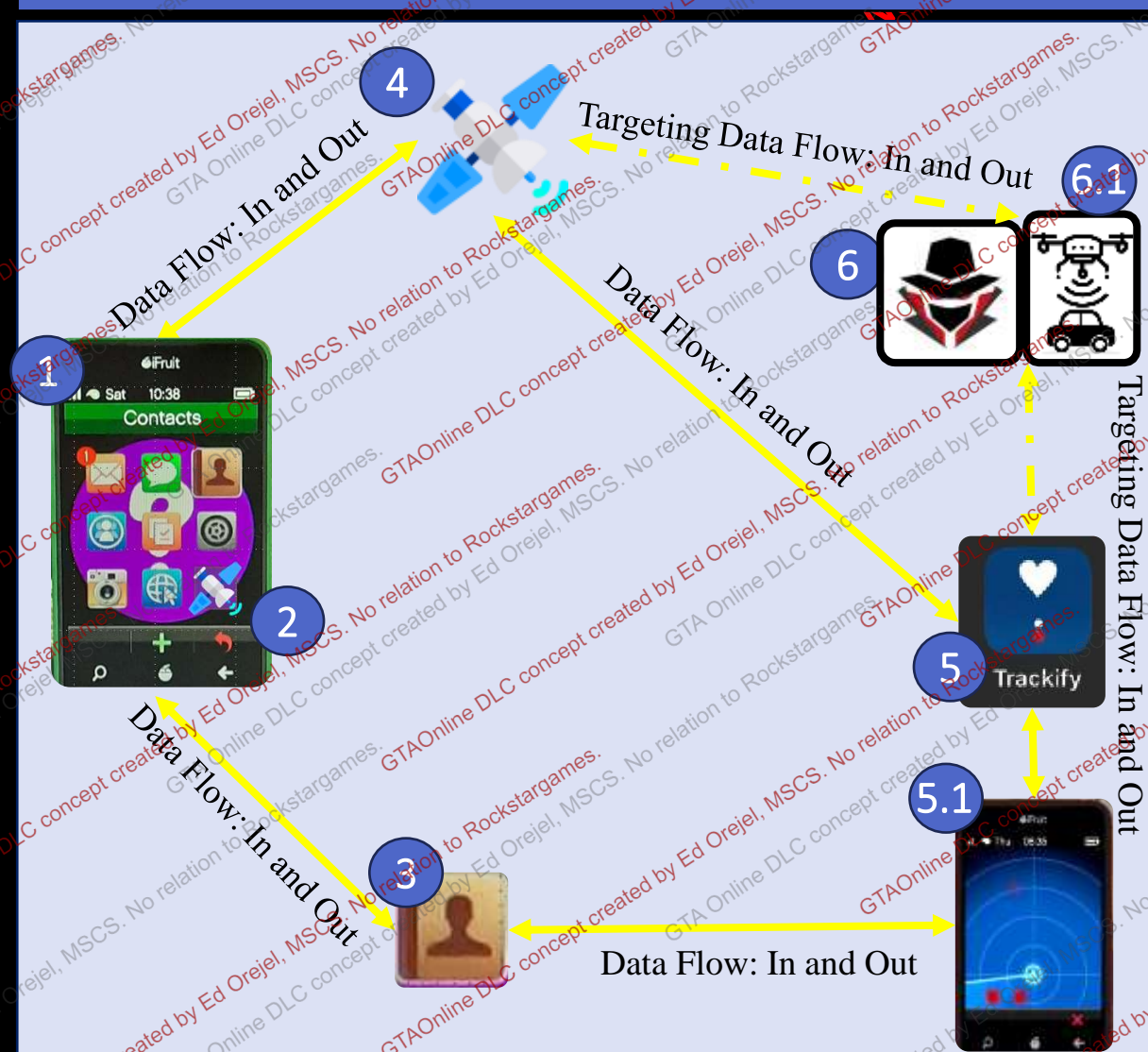
The Shadow Hacker Group will have access to all vehicle computers of every type of vehicle in San Andreas. The Shadow Hacker Group will use Vehicle Hacking Aerial Drones to hack the vehicle's computers.

After a successful hack, the vehicle is susceptible to remote control via the Shadow Hacker Group's drone. There are no unsuccessful hacks, so every vehicle is subject to hacking via the drone.

Every vehicle, including aircraft and watercraft, is susceptible to being hacked by the Vehicle Hacking Aerial Drone.

Radar and Targeting System Data Flow – Targeting Data Flow Between Components – Spy Satellite– Hacker Services – Vehicle Hacking Aerial Drone Connected to Spy Satellite

5



Once the components are assembled, the Vehicle Hacking Aerial Drone would receive data from the spy satellite in the form of GPS latitude and longitude coordinates of the player's cell phone.

1. The player's in-game cell phone.
2. The spy satellite linked to the in-game cell phone.
3. The mobile phone's Contact's List.
4. The newly added spy satellite.
5. Trackify cell phone icon.
 - 5.1 A radar system like GTA Online Trackify App.
6. Hacker services provided by the Shadow Hacker Group.
 - 6.1 Vehicle Hacking Aerial Drone

The spy satellite would know which vehicle belongs to the player. Some vehicles will not be accessible to the spy satellite because the cryptography on the vehicle's software is too strong to break. These vehicles are the following (pictures of vehicles not shown):

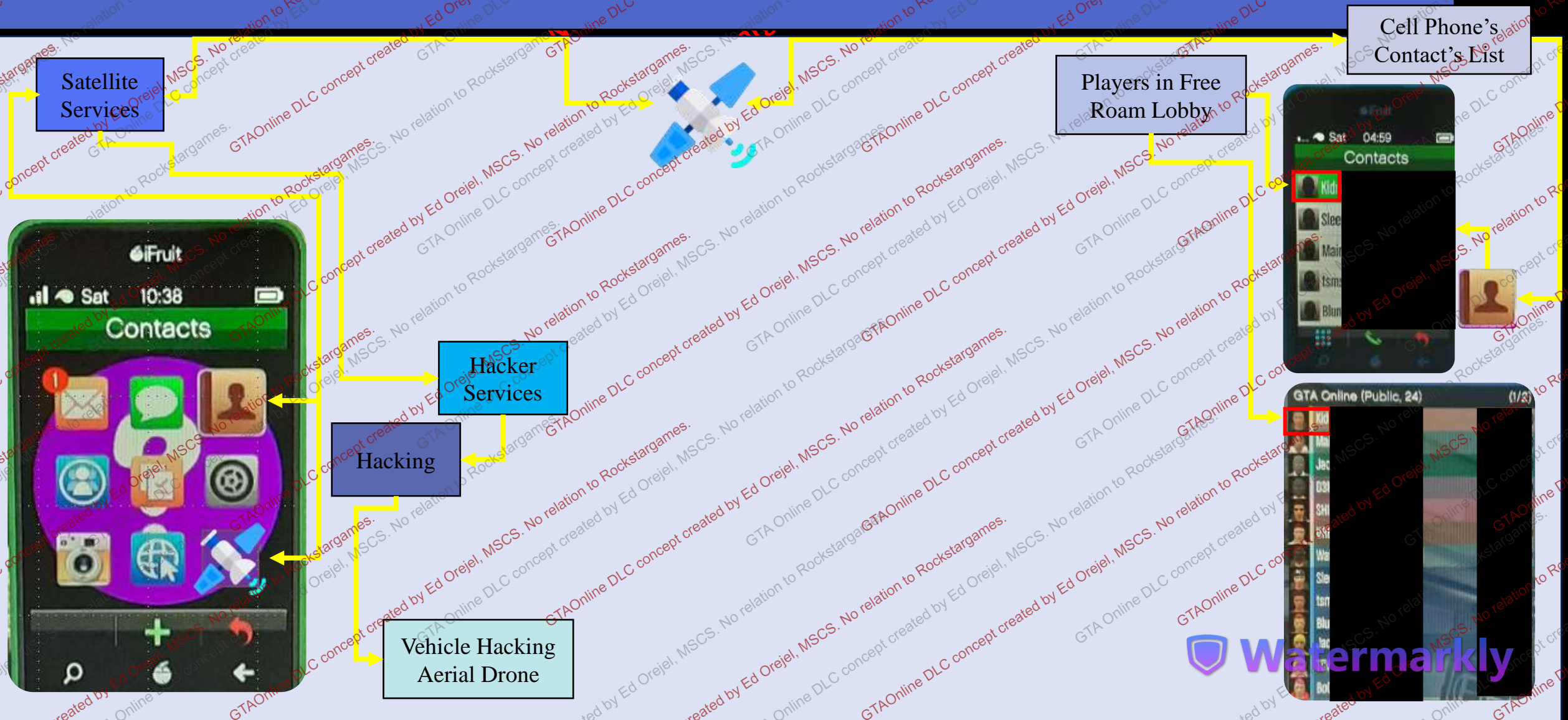
1. Mobile Operations Command Center (MOC),
2. Mammoth Avenger,
3. Benefactor Terrorbyte,
4. Brickade 6x6 Acid Lab,
5. Kosatka Submarine.



Conceptual Overview of Spy Satellite Services – Hacker Services – Vehicle Hacking Aerial Drone



6



Sources

7

- Source for Image #1
 - Car Hacks and How to Protect Yourself
 - <https://www.kaspersky.com/resource-center/threats/car-hacks-and-how-to-protect-yourself>
- Source for Image #2
 - How easy is it to hack your car?
 - <https://blog.passwork.pro/car-hacking/>
- Source for Image #3
 - Many Commercial Drones 'Insecure by Design'
 - <https://threatpost.com/many-commercial-drones-insecure-by-design/125420/>