

GTA Online Spy Satellite DLC – Military Services – Smart Vehicles – Electromagnetic Pulse (EMP) Vehicles

1

GTA Online Penned In Free Roam Lobby Contest



Image #2 Hypothetical EMP Explosion



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

Concept presented in this document is an EMP-capable Smart Vehicle provided by the spy satellite's Military Services.

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Brief Disclaimer

2

The DLC concept that is featured in this software development document is fictional. Since it is intended for GTA Online, a game that is owned by Rockstar Games, it will feature some aspects or concepts of their game to help me illustrate the DLC concept.

Any imagery that is owned by Rockstar Games, is only used by me for educational purposes, to help explain a concept that I am proposing.

No type of illegal or unauthorized modification to GTA Online is being proposed in this document. I am only reusing certain aspects of their game in a hypothetical manner. I am also including other components for addition into GTA Online.

Any other images found in this document are used solely for educational purposes and are property of their respective owners. Using any images from public sources does not mean I am claiming ownership over the images.

I will also use the GTA Online logo to help me illustrate some of the concepts I am proposing.

Accessing this presentation through my LinkedIn page (or any other way) does not give you the permission to distribute it nor claim it as your own work.

No relation to Rockstar Games nor GTA Online. Thank you.

Sincerely,

Ed Orejel, MSCS



Brief Disclaimer on Electromagnetic Pulse (EMP) Attack Illustration

3

In addition, I present a sample illustration of an electromagnetic pulse (EMP) blast. The sample illustration was created on Microsoft's PowerPoint. My Master of Science is in Computer Science. I am leaning towards C++ graphics and video game engine design quite heavily. This means I am not a graphic artist. I only draw what I need to help explain a concept. The sample EMP illustration should be easy to understand with my limited artistic skills.

Thank you

Vision Statement

4

EMP Vehicle



Military Group



I am currently deconstructing (learning) GTA Online's Targeting, Homing, and Explosion System to adapt it to some components found in the *GTA Online Spy Satellite DLC*. In doing that process, I created the concept of an EMP-capable smart vehicle for use in the *GTA Online Spy Satellite DLC*.

In this presentation, I will focus on the EMP-capable smart vehicle. The EMP vehicle will have the following abilities:

- Launch an electromagnetic pulse (EMP) attack.
- The EMP attack will originate from the vehicle.
- The EMP attack will run on a timer once launched.
- EMP blast will affect most vehicles and weapons with a computer or electrical system inside of them.

The players in GTA Online will be able to launch an electromagnetic pulse (EMP) attack against others players or NPCs in the city of San Andreas. The players will use the EMP-capable vehicle to launch the EMP attacks. After exposure to the EMP attack, most vehicles in the city of San Andreas will be affected.

The EMP blast will disable affected vehicles, including aircraft and watercraft, for a brief period. In GTA Online's free roam lobby, a brief period of time can render a significant advantage to a player against another player or players.

GTA Online's Targeting, Homing, and Explosion System and the EMP-capable smart vehicle are being deconstructed and designed only from the user's perspective. I am not looking at any actual C++ code or other types of code that belongs to Rockstar Games.

Sincerely,

Ed Orejel, MSCS

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

5

EMP Vehicle



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 vehicle's 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 Military Group will exploit the electrical systems in most vehicles by disabling them using an electromagnetic pulse (EMP) attack. Some vehicles will be resistant to the EMP attack.

GTA Online has many vehicles that fly. An EMP-capable vehicle should have the ability to fly. This is so the EMP-capable vehicle can position itself near other flying aircraft to disable them in midair with the EMP attack.

In addition, most of the abilities to create an EMP attack using an EMP-capable vehicle are currently in GTA Online, but in separate components. The components to create the EMP concept that I am proposing would have to be repurposed, modified, and assembled (encapsulated) into a distinct EMP component, so that the EMP functions as intended.

This concept was created from the user's perspective without looking at any C++ code or other code that belongs to Rockstar Games.

Military Group



EMP Blast



Brief Description – Electromagnetic Pulse

6

Electromagnetic Pulse

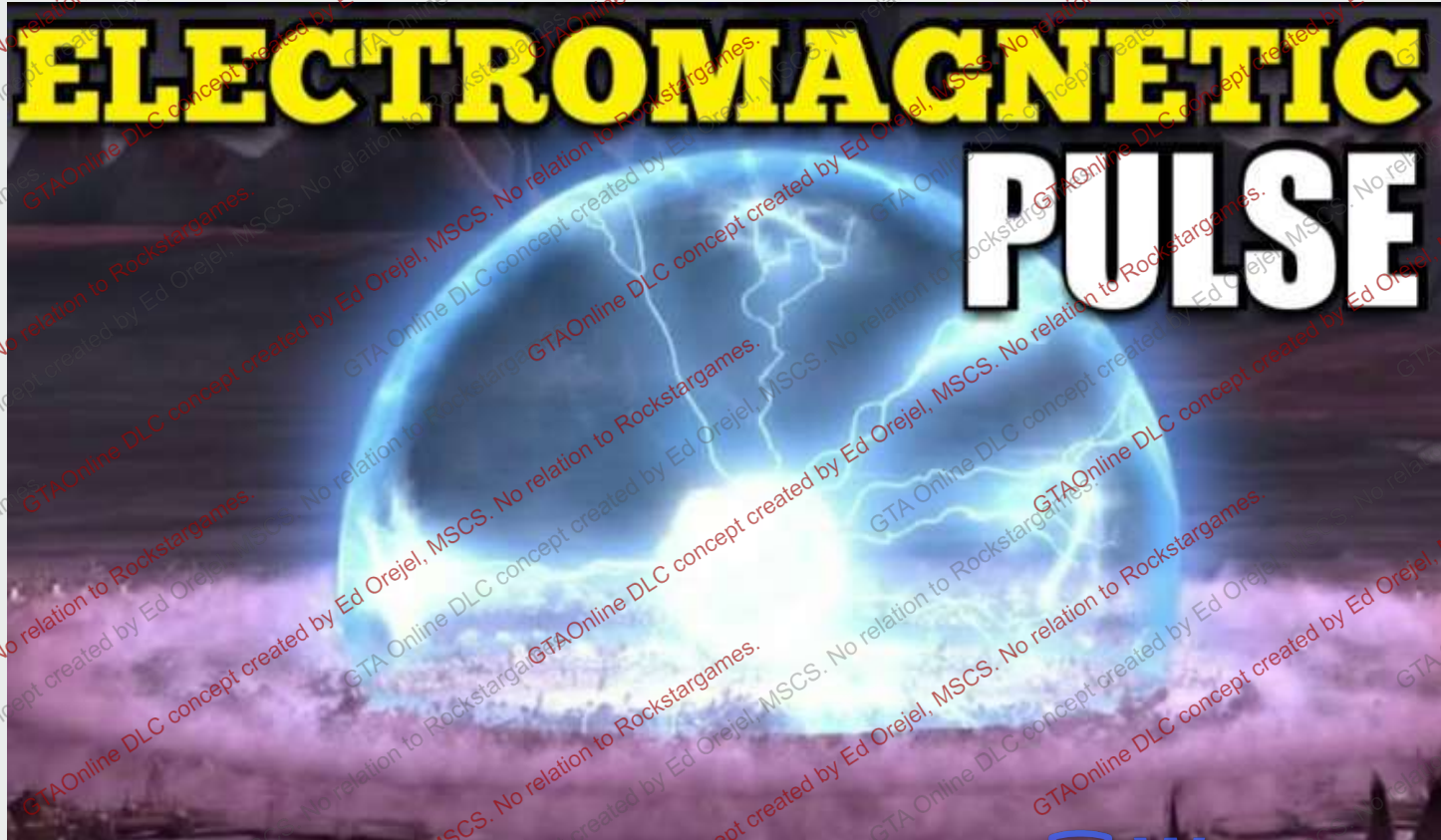
An electromagnetic pulse (EMP) is a burst of electromagnetic energy that can cause electronic devices to stop working.

Presumably, an EMP weapon could make all forms of electronic communication inoperable. Thus, a country would have no way of communicating for about 5 to 10 minutes after a significant EMP blast. Presumably, a hypersonic jet or hypersonic missile attack would follow.

The actual science behind an EMP blast is not required for the EMP effects to be included in GTA Online.

Instead of the EMP blast knocking various forms of electronic communication offline in GTA Online, the EMP blast can be localized and controlled by a vehicle.

The players would initiate an EMP blast using a vehicle as the source of the EMP.



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Brief Description – Penned In Game

7

Penned In Free Roam Lobby Contest

GTA Online had a free roam lobby contest called Penned In. It is visible in the image with the yellow half-circle shape. The words Penned In are written on it.

The contest goal was to stay inside the yellow shape until the timer ran out. Players stayed inside of the shape with their vehicles to play the game. The shape reduced in size as time progressed. The shape also moved randomly throughout the game map.

The shape can be repurposed to be viewed as an EMP blast.

The EMP blast will be continuous and it will run on a timer similar to a real EMP. In real life, the EMP timer is assumed.

The EMP effects would have to be programmed into GTA Online and be assigned to a vehicle, presumably.



Penning In Dome – EMP Blast – Comparison

8

GTA Online free roam lobby game: Penning In

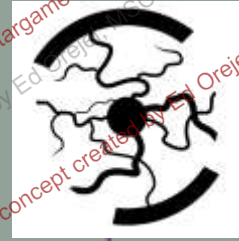


Hypothetical Electromagnetic Pulse (EMP) Blast





Smart Vehicle Concept – Proposed EMP Attack Capability – The EMP Attack With No Vehicle – Sample EMP Illustration



9

Electromagnetic Pulse Vehicle: Oppressor

The electromagnetic pulse (EMP) attack should resemble a giant sphere of electrical energy.

A sample EMP sphere is shown on the right. It is a sphere of electrical energy.

For the smart EMP vehicle as part of the GTA Online Spy Satellite DLC, the EMP will emanate from the vehicle. While the EMP attack is engaged, it will form a sphere around the vehicle.

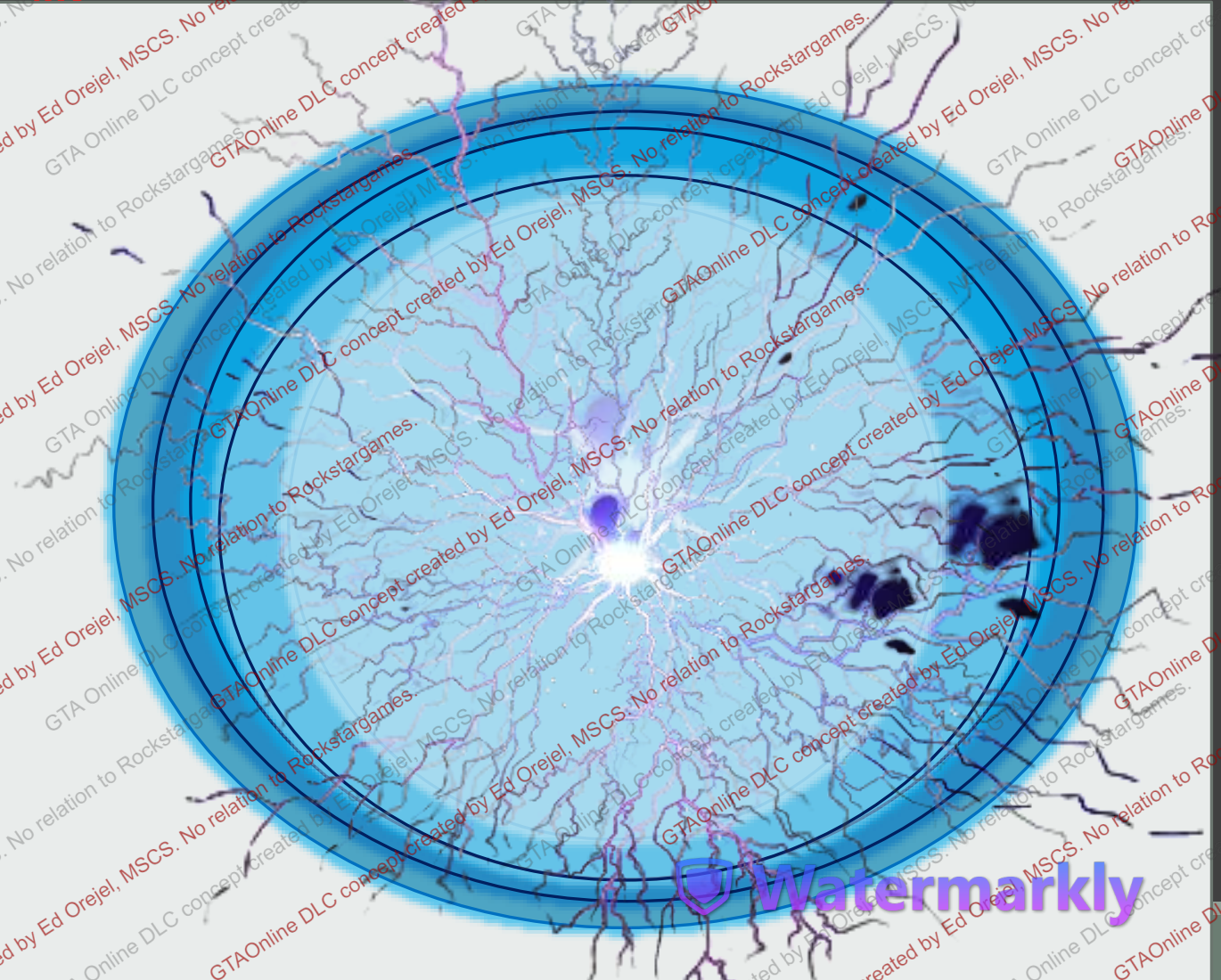
To make the EMP unique, different colors can be used by the players.

For robustness, the EMP blast can be broken down into vehicle upgrades:

1. EMP Blast Level #1 – only affects ground vehicles.
2. EMP Blast Level #2 – only affects aircraft.
3. EMP Blast Level #3 – only affects boats.
4. EMP Blast Level #4 – affects all incoming missiles including handheld RPG launcher and Homing launcher missiles.
5. EMP Blast Level #5 – affects all of the above conditions, thereby, making out the upgrade.

The player's in-game cell phone can receive an upgrade, so that in-game cell phone communications are not affected.

An EMP-able vehicle would be an interesting addition to GTA Online.





Smart Vehicle Concept – Proposed EMP Attack Capability – Vehicle – Oppressor – Sample EMP Illustration



10

Electromagnetic Pulse Vehicle: Oppressor

The Oppressor is shown on the right. It has activated the Electromagnetic Pulse (EMP) weapon. The EMP will expand in size as the attack is engaged.

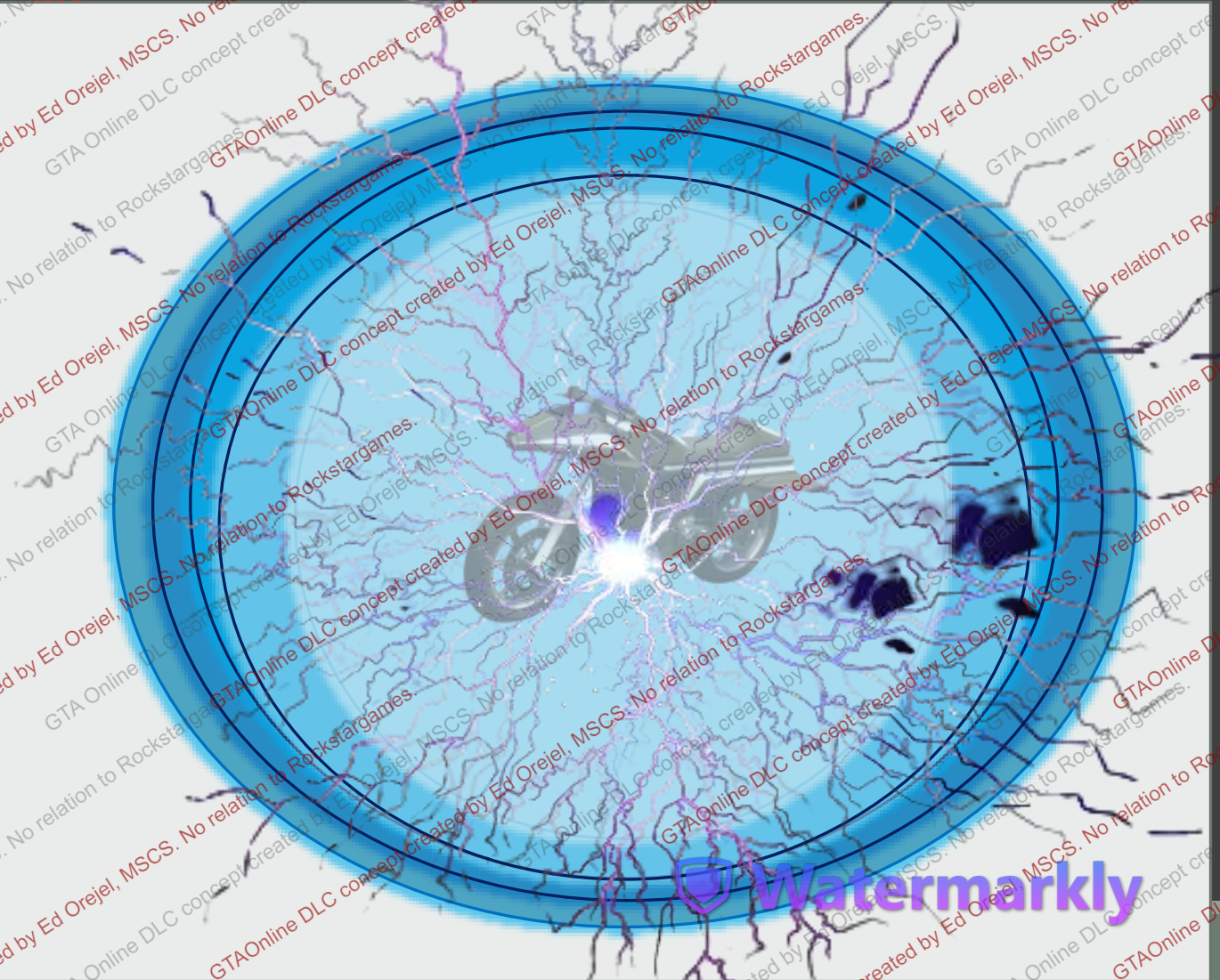
The Oppressor motorcycle remains at the radius of the circular EMP attack as the EMP attack increases in size.

The EMP attack will move with the Oppressor as it is driven by the player.

The Oppressor will be able to fly and engage the EMP attack in midair. The EMP sphere will be visible while airborne. While on the ground, the EMP attack will resemble a half sphere. Vehicles on top of freeway overpasses are affected as the EMP vehicle travels through the underpass.

At all times, the Oppressor should remain at the center of the EMP attack.

The EMP attack should resemble a giant sphere of electrical energy.



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Smart Vehicle Concept – Proposed EMP Attack Capability – Vehicle – Deluxo – Sample EMP Illustration



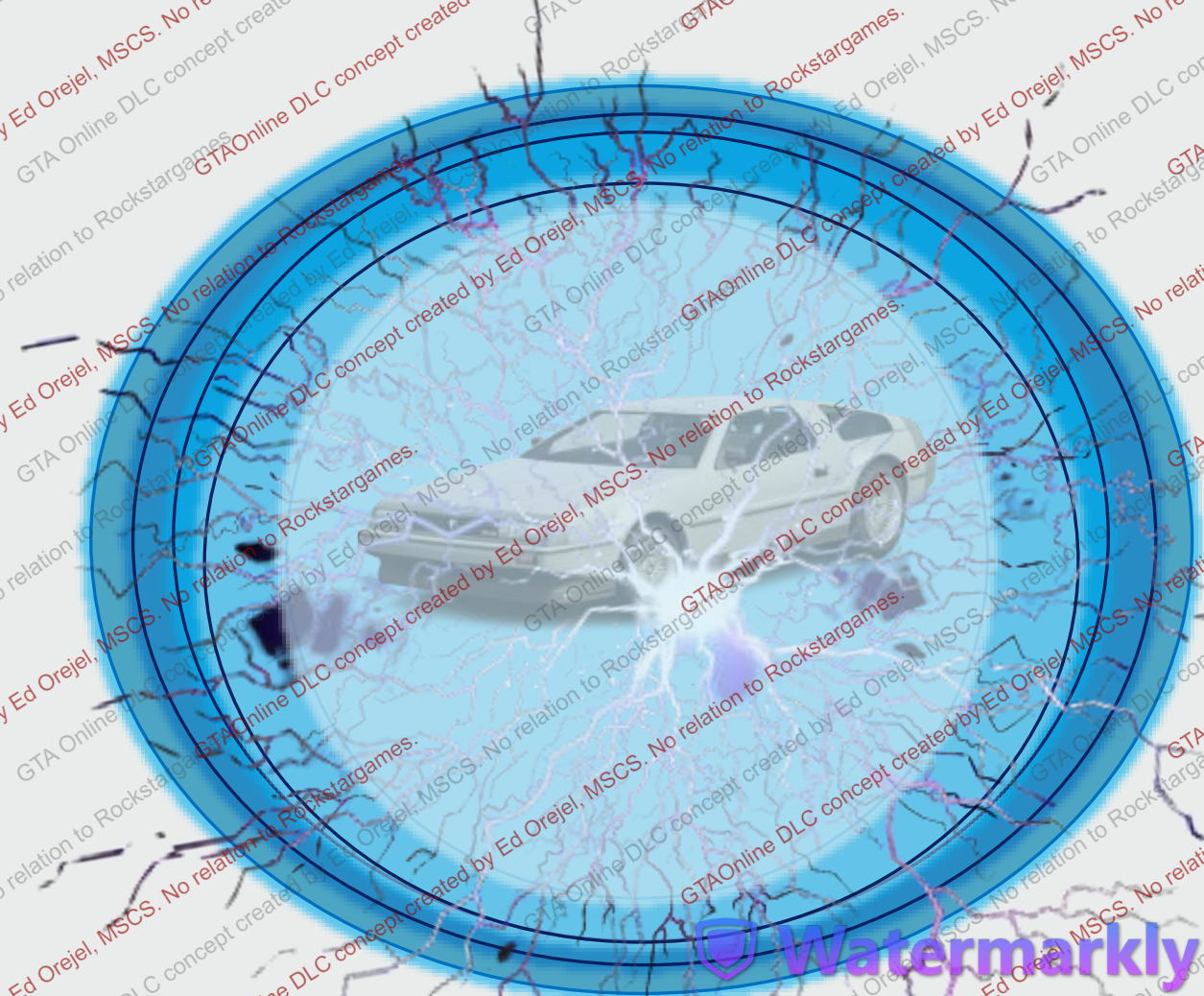
11

Electromagnetic Pulse Vehicle: Oppressor

The Deluxo is shown on the right. It has activated the Electromagnetic Pulse (EMP) weapon. The EMP will expand in size as the attack is engaged.

The same general guidelines from the Oppressor apply to the Deluxo when it has the Electromagnetic Pulse (EMP) weapon engaged.

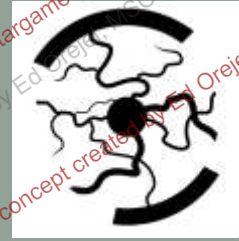
The Deluxo and the Oppressor were chosen for no particular reason.



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Smart Vehicle Concept – Proposed EMP Attack Capability – EMP Attack Circumference – Sample Illustration



12

Electromagnetic Pulse Vehicle Attack

The circumference of the EMP attack should stretch from one end of the sidewalk, to the other end of the sidewalk, going from left-to-right.

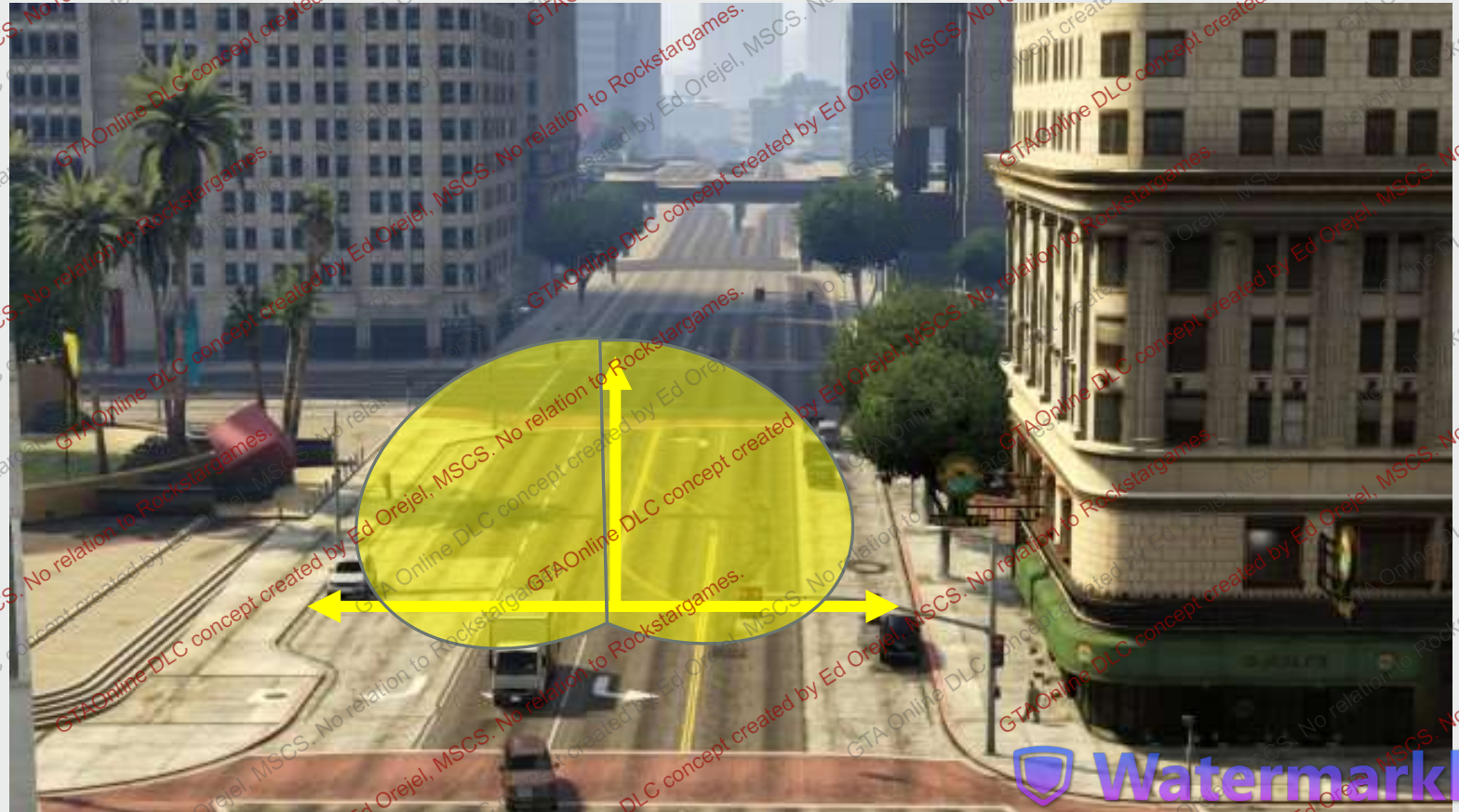
See the arrows going from left-to-right.

The circumference of the EMP attack should stretch the same distance from top-to-bottom. See the arrow pointing up. See the yellow circular shape for a potential size of the EMP attack.

See the vehicles for a comparison of the EMP attack, compare the size of the attack to the vehicles in the image.

The Oppressor or Deluxo must remain at the radius of the EMP sphere.

At this size, this makes the smart EMP vehicle concept an interesting addition to GTA Online because the vehicle will be a rolling EMP device shutting down vehicles within its reach.



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Brief Description—Sample EMP Attacks in GTA Online

13

EMP Landmine in GTA Online

EMP landmines are found in GTA Online. This is not what I am proposing. This method is effective, but I think the EMP concept can be taken to the next level by creating a smart vehicle that emits EMPs for its main weapon.



EMP Weapon in GTA Online

An EMP weapon is currently in GTA Online. This method is also effective. However, an EMP vehicle could still prove fruitful in GTA Online. The weapon also has limited reach. An EMP vehicle would create a very competitive environment.



Brief Description – Sample EMP Attacks – Attacks Not in GTA Online

14

Chinese EMP Missile

The image below is an EMP missile. This is not the EMP delivery device I am proposing in this presentation. I do, however, have EMP missiles as a component in a different part of the GTA Online Spy Satellite DLC.



Sample EMP Aerial Drone Delivery

Image #1 shows what could be an EMP being delivered using an unmanned aerial drone. This is not the method I am proposing.



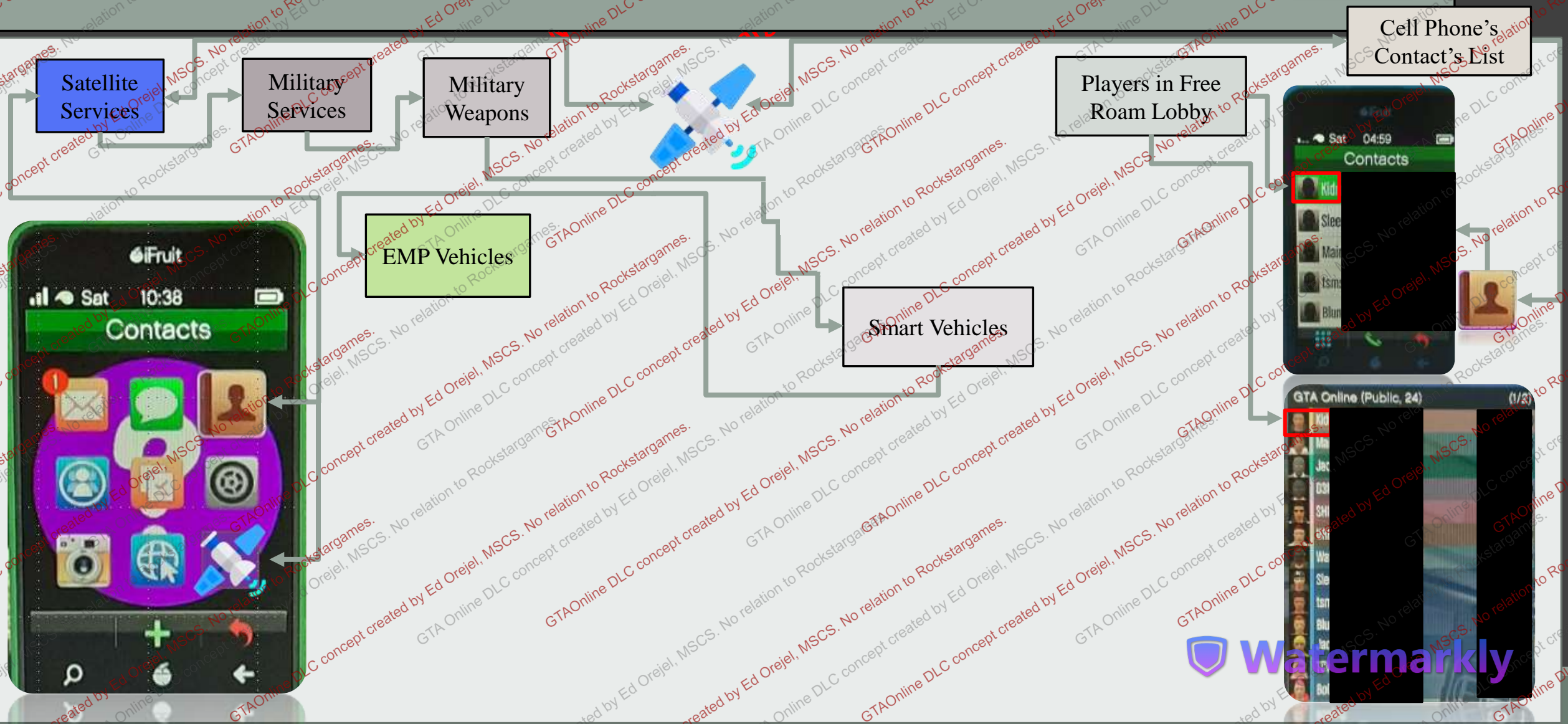




Top-Level Component View – Military Services – Smart Vehicles – EMP Vehicles



16



Top-Level Component View – Military Services – Smart Vehicles – EMP Vehicles

17

- Electronics-killing EMP weapons for combat aircraft is focus of \$15 million contract to Raytheon
 - <https://www.militaryaerospace.com/rf-analog/article/16726354/electronicskilling-emp-weapons-for-combat-aircraft-is-focus-of-15-million-contract-to-raytheon>
- Finally, a presidential EMP order that may save American lives
 - <https://thehill.com/opinion/national-security/436222-finally-a-presidential-emp-order-that-may-save-american-lives/>
- Image #1 Source
 - Electronics-killing EMP weapons for combat aircraft is focus of \$15 million contract to Raytheon
 - <https://www.militaryaerospace.com/rf-analog/article/16726354/electronicskilling-emp-weapons-for-combat-aircraft-is-focus-of-15-million-contract-to-raytheon>
- Image #2 Source
 - Air Force Confirms Electromagnetic Pulse Weapon
 - <https://www.cnn.com/videos/us/2015/05/25/orig-boeing-electromagnetic-pulse-weapon.cnn>
- Penned In – GTA Online Free Roam Contest
 - https://gta.fandom.com/wiki/Penned_In#:~:text=9%20Navigation-Description,to%20other%20players%20killing%20them.
- Chinese EMP Missile Images
 - **China's EMP missile would plunge cities into darkness**
 - <https://asiatimes.com/2021/09/chinas-emp-missile-would-plunge-cities-into-darkness/>