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International application number:	<b>PCT/CA2018/051080</b>
International filing date:	<b>06 September 2018 (06.09.2018)</b>
Document type:	<b>Certified copy of priority document</b>
Document details:	Country/Office: <b>US</b>
	Number: <b>62/570,028</b>
	Filing date: <b>09 October 2017 (09.10.2017)</b>
Date of receipt at the International Bureau:	<b>26 September 2018 (26.09.2018)</b>

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a),(b) or (b-bis)

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Filing date: 09 Oct 2017 (09.10.2017)

Application number: 62570028

Date of availability of document: 14 Sep 2018 (14.09.2018)

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*September 26, 2018*

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**APPLICATION NUMBER: 62/570,028**  
**FILING DATE: *October 09, 2017***

**THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS *US62/570,028***



Certified by

*Andres Ibarra*

Under Secretary of Commerce  
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Doc Code: **TR.PROV**

Document Description: Provisional Cover Sheet (SB16)

PTO/SB/16 (11-08)

Approved for use through 05/31/2015. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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### Provisional Application for Patent Cover Sheet

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c)

#### Inventor(s)

Inventor 1

Remove

Given Name	Middle Name	Family Name	City	State	Country i
Damon	Jay	GIRAUD	North Vancouver		CA

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Dominique		KWONG	North Vancouver		CA

All Inventors Must Be Listed – Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

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Title of Invention

MOTORCYCLE SAFETY SYSTEM

Attorney Docket Number (if applicable)

DMX001A-USPR

#### Correspondence Address

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Firm or Individual Name

Customer Number

94289

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

- No.
- Yes, the invention was made by an agency of the United States Government. The U.S. Government agency name is:
- Yes, the invention was under a contract with an agency of the United States Government. The name of the U.S. Government agency and Government contract number are:

**Entity Status****Applicant asserts small entity status under 37 CFR 1.27 or applicant certifies micro entity status under 37 CFR 1.29**

- Applicant asserts small entity status under 37 CFR 1.27
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- No

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**Signature**

Please see 37 CFR 1.4(d) for the form of the signature.

Signature	DamienGLoveland/		Date (YYYY-MM-DD)	2017-10-09	
First Name	Damien	Last Name	LOVELAND	Registration Number (If appropriate)	75635

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## MOTORCYCLE SAFETY SYSTEM

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### DESCRIPTION

**[0002]** FIG. 1 shows modules that make up the Rift™ motorcycle safety system. These include: Force pressure sensors (to derive driver intent); Haptic communication language; Raw data collection / transmission prioritization (based on need/use case); Scenario modelling and threat prediction from reverse engineering behavioural cues on the street; Edge computing for low latency data processing; and Rider controlled safety update authentications.

**[0003]** FIG. 2 – Crowd-sourced SW updates.

**[0004]** FIG. 3 explains the features of the Rift™ Connect system. Icons are white figures on solid red circles.

**[0005]** LTE CONNECTION: Damon uses a persistent LTE connection to keep you connected with your motorcycle at all times, even when you're miles away.

**[0006]** DEEP LEARNING: Through steering feedback, aggregate rider behavior collection and other rider inputs, Rift™ is constantly improving its threat detection capability. With constant over air updates, the onboard neural network lets Rift™ vision systems see and respond to more threats over time, keeping you ever safer on the road.

**[0007] LOCATION TRACKING:** Instead of relying on your phone, Damon's built-in GPS engine can tell you exactly where your motorbike is at all times, -even if you aren't on it. Never worry about your bike being stolen again.

**[0008] 6-AXIS ACCELEROMETER:** With the Rift™ Connect, Damon can tell if your motorcycle has been bumped, towed, or if someone is even sitting on it when you're not there. It also uses your lean angle, pitch and other data points to get to know your unique riding style.

**[0009] OWNER AUTHENTICATION:** Using your own thumb print, Damon ensures all software updates to the motorcycle are permitted only by the owner. With each update, new feature training tutorials are delivered right to the Rift™ app on your phone.

**[0010] DATA PRIVACY:** Damon privacy policy is the best in the business. We will never divulge consumer or personal information of any kind about our customers to any party for any reason without explicit permission or user initiation.

**[0011] ONBOARD SENSORS:** Rift™ Connect collects and batches visual data of up to 360° from its onboard sensors. By combining this data with rider and motorcycle inputs, it can predict and help prevent more accidents over time.

**[0012] SECURITY:** Damon uses the highest security solutions available, employing 256-bit encryption with secure data access via Authentication, Authorization, and Verification mechanisms.

**[0013]** FIG. 4 is a mobile device with screen shot giving access to safety feature updates.

**[0014]** FIG. 5 is the mobile device with a screen shot showing vehicle location and status. The start (black flag), finish (checkered flag) and current location (motorcycle icon) are shown on a map. The time elapsed is 00:35:56, the distance is 2.4km and the maximum speed is 60km/h. Various navigation icons are shown for navigation within the app. FIG. 6 shows the same view with more map detail.



**[0015]** FIG. 7 shows a screen displaying "Impact Detected"; "120 seconds remaining"; and "Your location & medical information will be sent to the nearest ambulance service unless you confirm that you are OK and do not require assistance". An OK button is displayed below the text.

**[0016]** FIG. 8 is a live view from the motorcycle. Video clips can be managed and shared to social media profiles.

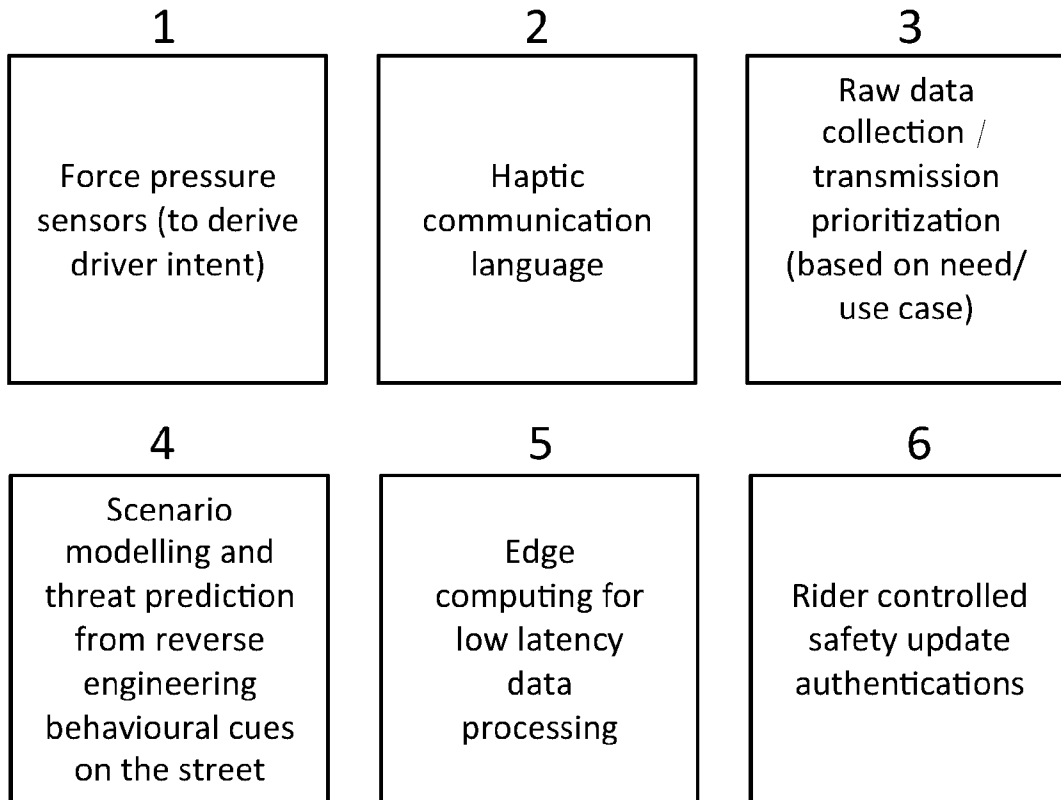
**[0017]** FIG. 9 is a notifications screen, showing, from top to bottom: "Trip Started 8 hours ago"; "Trip completed 5 hours ago"; "Disturbance detected 2 hours ago"; "Battery life good"; "Theft alert 2 hours ago".

**[0018]** FIG. 10 is an enlarged, alternate rendering of FIG. 8.

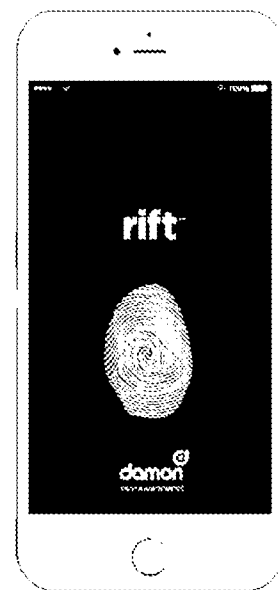
**[0019]** FIG. 11 is an enlarged, alternate rendering of FIG. 9.

**[0020]** FIG. 12 is a flowchart showing the main steps the motorcycle safety system takes.

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damon  
360° AWARENESS




 Safety feature updates

FIG. 1

### Crowd-Sourced SW Updates

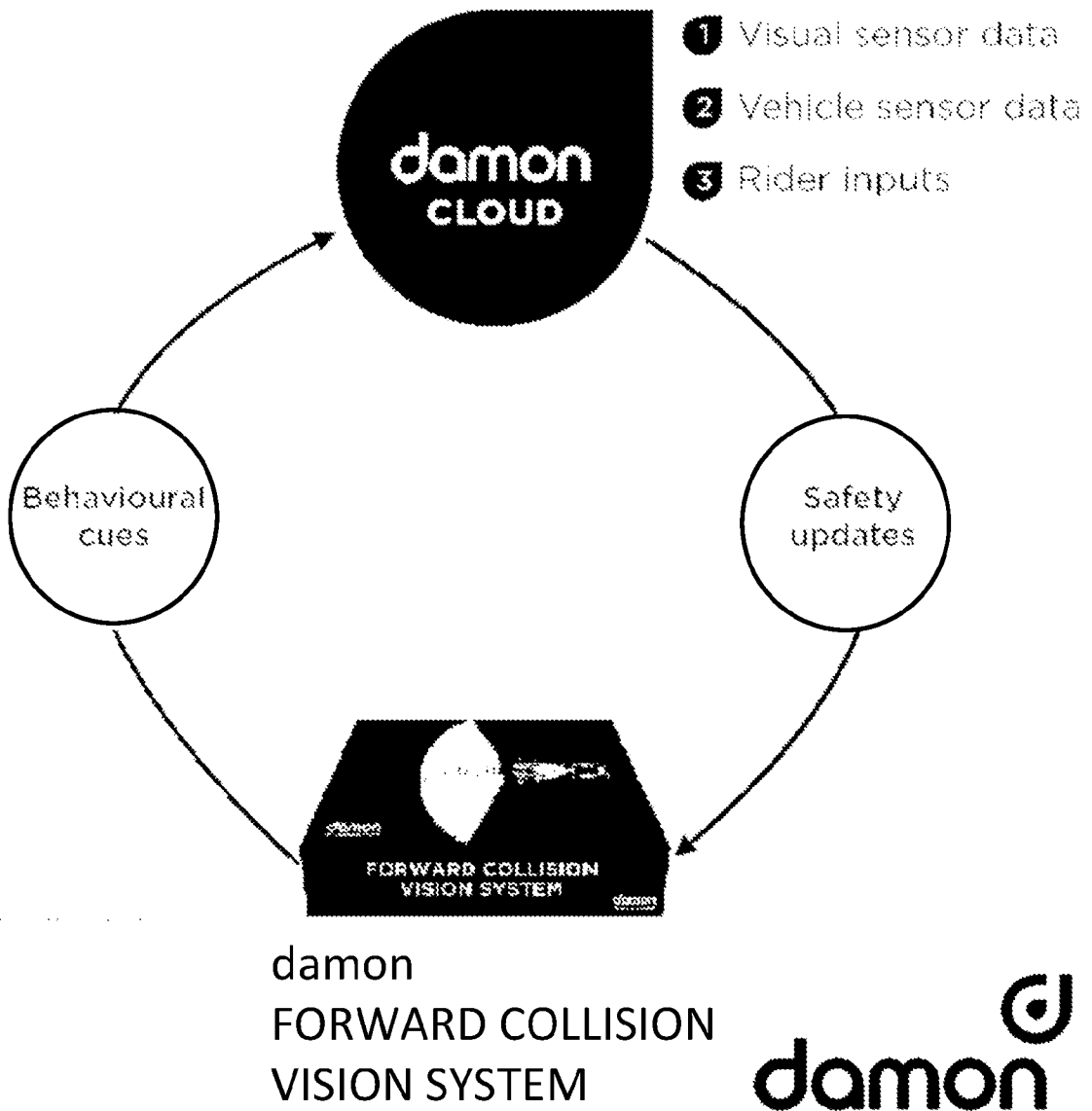
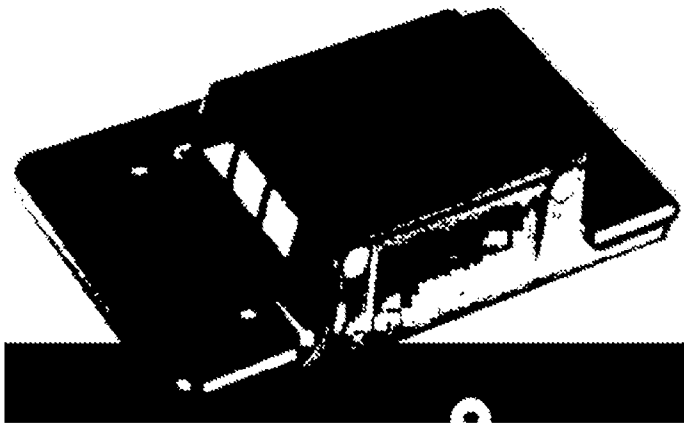
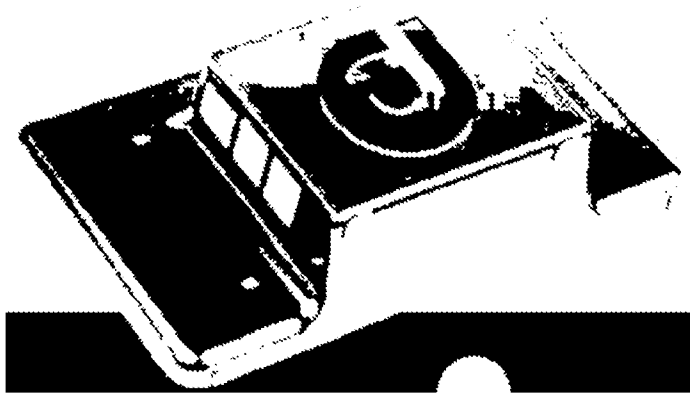


FIG. 2

# Rift™ Connect



LTE CONNECTION



DEEP LEARNING



LOCATION TRACKING



6-AXIS ACCELEROMETER



OWNER AUTHENTICATION



DATA PRIVACY

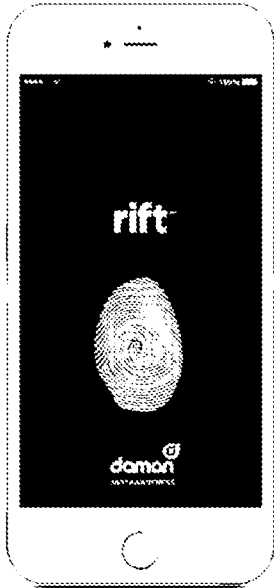


ONBOARD SENSORS



SECURITY

FIG. 3




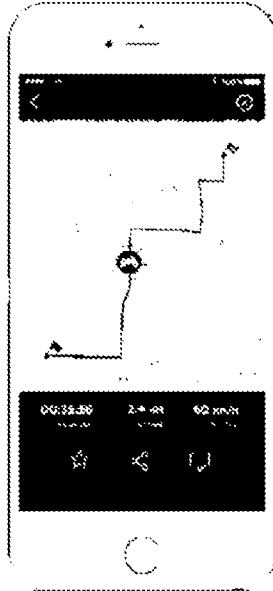
 Safety feature updates

FIG. 4




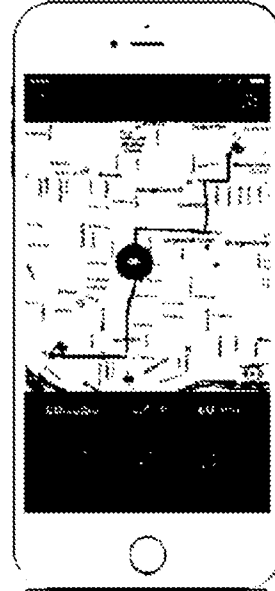
 Track vehicle location & status

FIG. 5




 Track vehicle location & status

FIG. 6





 e911 emergency services



FIG. 7



 Manage video clips




 Share to social media profiles

FIG. 8



 Disturbance alert

 Low battery alert


 Theft alert

FIG. 9



 Manage video clips


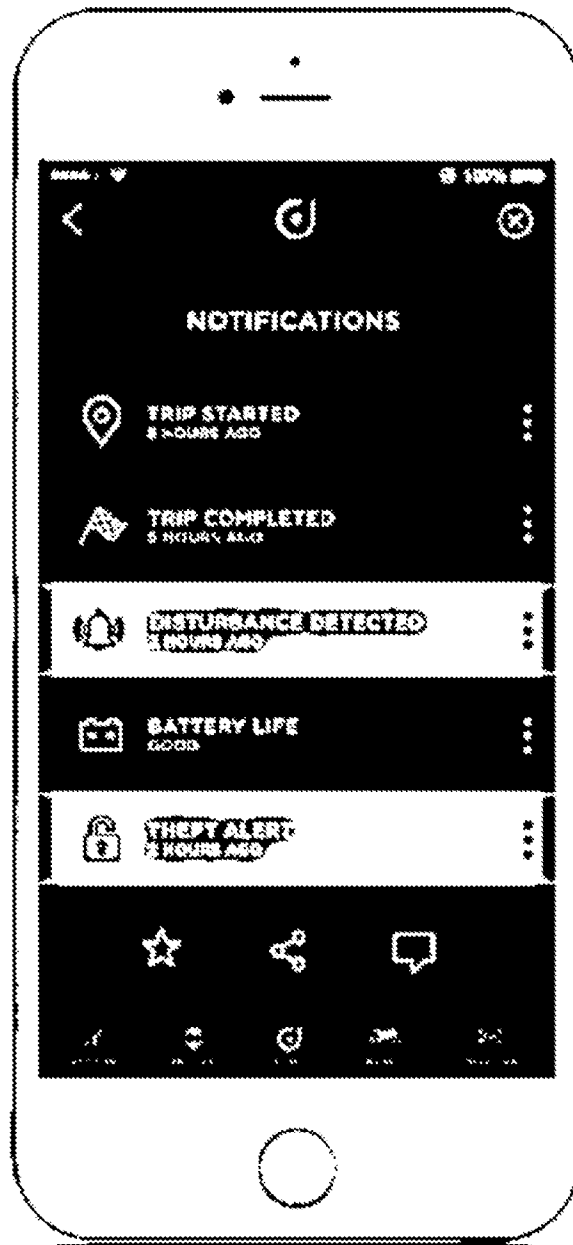
 Share to social media profiles

FIG. 10






-  Disturbance alert
-  Low battery alert
-  Theft alert

FIG. 11

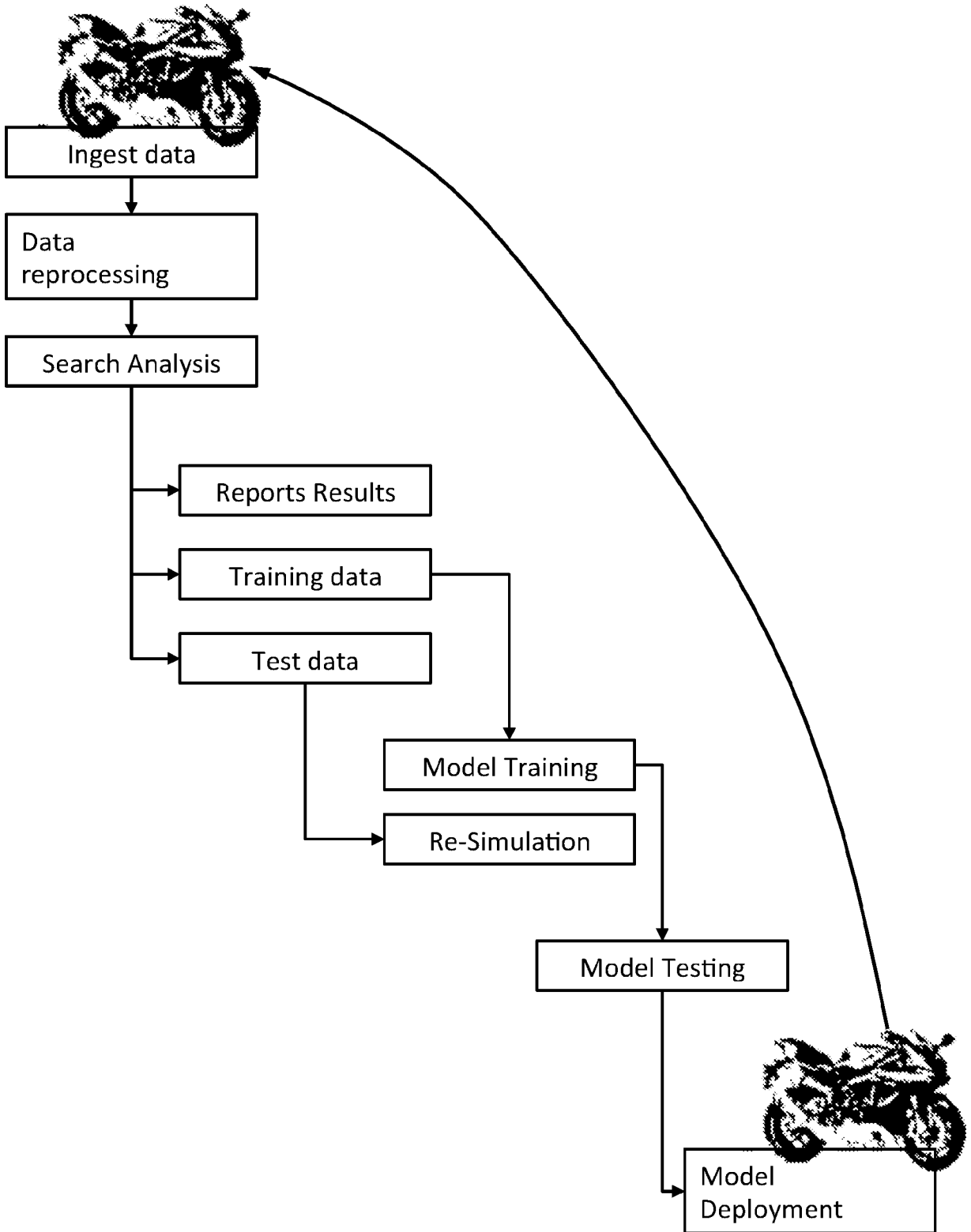


FIG. 12



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	30604197
<b>Application Number:</b>	62570028
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	7407
<b>Title of Invention:</b>	MOTORCYCLE SAFETY SYSTEM
<b>First Named Inventor/Applicant Name:</b>	Damon Jay Giraud
<b>Customer Number:</b>	94289
<b>Filer:</b>	Damien Gerard Loveland
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	DMX001A-USPR
<b>Receipt Date:</b>	09-OCT-2017
<b>Filing Date:</b>	
<b>Time Stamp:</b>	19:49:55
<b>Application Type:</b>	Provisional

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2	Specification	DMX001A-USPR-Spec-AsFiled.pdf	50563	no	3
			04cfd0cacb0b7e3780e427d82376b0c9dc5b1fa0		
<b>Warnings:</b>					
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3	Drawings-other than black and white line drawings	DMX001A-USPR-Figs-AsFiled.pdf	326987	no	7
			c2437730bc4592905d2fa4e58d307cf0ddfa4e9		
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