

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

SONRAI SYSTEMS, LLC, AND  
ADVANCED CUSTOM ENGINEERED  
SYSTEMS & EQUIPMENT CO.,

Plaintiffs,

v.

AMCS GROUP INC., LAKESHORE  
RECYCLING SYSTEMS, LLC, AND  
REHRIG PACIFIC COMPANY,

Defendants.

Civil Action No. 1:16 cv 9404

**JURY TRIAL DEMANDED**

Honorable Judge Rebecca R. Pallmeyer  
Hon. Mag. Judge M. David Weisman

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**FIRST AMENDED COMPLAINT**

Plaintiffs, Sonrai Systems, LLC (“Sonrai”) and Advanced Custom Engineered Systems & Equipment Co., (“ACES”) (collectively, “Plaintiffs”), for their Complaint against AMCS Group, Inc. (“AMCS”), Lakeshore Recycling Systems, LLC (“Lakeshore”), and Rehrig Pacific Company (“Rehrig”) (collectively, “Defendants”), state as follows:

**SUMMARY OF THE CLAIMS**

1. After developing a long, established relationship with Sonrai and ACES, Lakeshore used its position of trust to gain access to municipalities such as the City of Wheaton. Lakeshore further used the patented Sonrai monitoring and tracking systems to provide product proposals to various municipalities, including the City of Wheaton. Worse, Lakeshore took a written presentation made by Sonrai and used the very same presentation during a meeting with the City of Wheaton, knowing full well that Lakeshore intended to replace Sonrai with AMCS and Rehrig. Lakeshore knew that the AMCS and Rehrig systems infringed the patented Sonrai RFID validation and tracking system in connection with the Lakeshore proposal.

2. Lakeshore, AMCS and Rehrig all used the patented Sonrai Radio Frequency Identification (“RFID”) validation and tracking system.

3. Plaintiffs assert claims for patent infringement against Lakeshore, AMCS and Rehrig, arising under the patent laws of the United States, to prevent and enjoin Lakeshore, AMCS and Rehrig from infringing and profiting from, in an unlawful and unauthorized manner U.S. Patent No. 8,146,798 (the “798 Patent”) (attached as Exhibit A) and U.S. Patent No. 8,714,440 (the “440 Patent”) (attached as Exhibit B).

4. Plaintiffs also assert claims for trademark infringement against Lakeshore, arising under § 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

#### **THE PARTIES**

5. ACES is an Illinois corporation having a place of business located at 25W102 Ramm Drive, Naperville, IL 60564. ACES is an innovative designer and developer of systems and methods for monitoring mobile fleet applications such a waste service fulfillment events. ACES holds dozens of patents and patent applications, as well as a multitude of confidential and proprietary designs related to waste management, mobile tracking systems and similar technologies.

6. ACES owns and has standing to sue for patent infringement of United States Patent Nos. 8,146,798 and 8,714,440 (collectively “the ACES Patents”).

7. ACES is the registrant and owner of the entire interest of United States Trademark Reg. No. 3,606,608 (the “608 mark”), Reg. No. 3,742,782 (the “782 mark”) and Reg. No. 3,606,607 (the “607 mark) (collectively “the Sonrai marks”) (Exhibit C).

8. The ‘608 mark has been registered with the United States Patent and Trademark Office since April 14, 2009; the ‘782 mark has been registered since January 26, 2010; and the ‘607 mark has been registered since April 14, 2009.

9. ACES has standing to sue for any damages and injunctive relief related to the Sonrai marks.

10. Sonrai is the exclusive licensee of the Sonrai marks, and therefore has standing to sue.

11. Sonrai is an Illinois limited liability company with its principal place of business located at 25W102 Ramm Drive, Naperville, Illinois 60564; its members are all Illinois residents. Sonrai is an information technology company with a focus on retail backroom and building automation, with extensive experience in the equipment manufacturing, waste collection and management industries.

12. Sonrai is the exclusive licensee of United States Patent Nos. 8,146,798 and 8,714,440 and thus has standing to sue for infringement.

#### **JURISDICTION AND VENUE**

13. Plaintiffs' claim for patent infringement against AMCS arise under the patent laws of the United States, including 35 U.S.C. §§ 271 and 281. This Court has original subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338.

14. AMCS is a corporation organized under the laws of Limerick, Ireland, with its principal American sales office located at 119 South Fifth Street, Oxford, Pennsylvania 19363. AMCS is doing business and infringing Plaintiffs' patents in this district and elsewhere in the United States.

15. AMCS is an international supplier of integrated software and vehicle technology for the waste, recycling and material resources industries. AMCS is subject to both specific and general jurisdiction of this Court because, among other things, it has established contacts with Illinois and in this judicial district. AMCS has conducted business in the Northern District of Illinois and the State of Illinois; it has committed acts of patent infringement within Illinois and

this judicial district giving rise to this action; and it has minimum contacts with the forum such that the exercise of jurisdiction over it would not offend traditional notions of fair play and substantial justice.

16. Lakeshore is an Illinois limited liability company with its principal place of business located at 6132 Oakton Street, Morton Grove, Illinois 60053. Lakeshore conducts business within this judicial district including the activities accused of infringement.

17. Rehrig is a Delaware corporation, having its principle place of business at 4010 E. 26<sup>th</sup> Street, Los Angeles, California, 90058. Rehrig is registered in Illinois, while also maintaining warehouses in Rock Falls, Illinois and Olney, Illinois. Rehrig conducts business within this judicial district including the activities accused of infringement.

18. Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and/or 1400(b).

19. This Court has jurisdiction over Plaintiffs' trademark infringement claim arising under the Trademark Laws of the United States as codified in 15 U.S.C. § 1051 et seq.

### **BACKGROUND**

20. Sonrai has developed its exclusive "Event Validation System," the RFID Validation, Tracking and Event Monitoring Solution and other intellectual property rights related to this system are owned by ACES. Among other things, the event validation system establishes a computer based visual confirmation that waste hauling service has been completed in real-time on a satellite map to be viewed by the waste hauling truck fleet operator. This gives the fleet operator benefits in the areas of transit visibility, work order management, dispatch operations, route optimizing and tracking, and inventory asset optimization, among other benefits.

21. Sonrai's work in the area of RFID Validation, Tracking and Event Monitoring Solution has been noted in the industry. As reported in Forbes magazine, Sonrai's work made it one of the recipients of the Sustainability Partnership Game Changer Award for "a strategic plan of sustainable partnerships that would modernize waste and recyclables collection for the 21<sup>st</sup> century."

### **THE PATENTS**

22. United States Patent No. 8,146,798 (the "'798 Patent") entitled "Method and Apparatus for Monitoring Waste Removal and Administration" was issued on April 3, 2012.

23. The '798 Patent generally relates to a method and apparatus for controlling, tracking and monitoring movement of waste or refuse receptacles.

24. The claims of the '798 Patent pertain to a method for a municipality to track the condition, pick-up, and general use of a large number of refuse containers among its citizens and businesses.

25. United States Patent No. 8,714,440 (the "'440 Patent") entitled "Method and Apparatus for Monitoring Waste Removal and Administration" was issued on May 6, 2014.

26. The claims of the '440 Patent pertain to a method for a municipality to track the condition, pick-up, and general use of a large number of refuse containers among its citizens and businesses.

27. ACES has been able to commercialize the '798 and '440 Patents through Sonrai by, among other things, entering into agreements in which its RFID Validation, Tracking and Event Monitoring Solution is used within the City of Highland Park, Illinois to provide residential waste hauling services.

28. Lakeshore is in the business of providing residential waste hauling to municipalities. Lakeshore negotiates and enters a contract with the municipality for the handling of municipal waste, recycling and other refuse collection.

29. Lakeshore provides the necessary equipment to collect the municipal waste, recycling and other refuse collection. The residents of the municipality pay Lakeshore directly for the collection of waste materials.

30. Lakeshore may hire subcontractors to perform various services with respect to the collection of waste, recycling and other refuse.

31. Lakeshore entered into a contract with the municipality of Highland Park to collect waste, recycling and other refuse within that municipality.

32. Prior to entering the contract with Highland Park, Lakeshore contracted with Sonrai for Sonrai to provide software and other components for managing the condition, pick-up and general use of a large number of refuse containers within the municipality of Highland Park.

33. Sonrai provided Lakeshore with its RFID Validation, Tracking and Event Monitoring System.

34. On or around October 12, 2015, Sonrai made a presentation to Lakeshore, whereby Sonrai disclosed to Lakeshore its unique RFID Validation, Tracking and Event Monitoring Solution. The RFID Validation, Tracking and Event Monitoring Solution is covered by one or more claims of the '440 and/or '798 Patents.

35. Sonrai presented a proposal to Lakeshore to implement the RFID Validation, Tracking and Event Monitoring Solution in association with the trucks utilized in the collection

of waste, recycling and other refuse in Lakeshore's bid proposal to the municipality of Highland Park.

36. Lakeshore worked extensively with Sonrai to implement the Sonrai RFID Validation, Tracking and Event Monitoring Solution within the Lakeshore equipment and provided support to Lakeshore.

37. Lakeshore was impressed with the Sonrai RFID Validation, Tracking and Event Monitoring Solution.

38. As part of the Sonrai RFID Validation, Tracking and Event Monitoring Solution, Lakeshore was able to eliminate the current "sticker" collection system in Highland Park and utilize a "pay as you go" collection system in which residents could pay Lakeshore based upon the specific amount of waste, recycling or other refuse collection.

39. Use of the Sonrai RFID Validation, Tracking and Event Monitoring Solution with the Lakeshore equipment was instrumental in obtaining a contract with Highland Park.

40. Lakeshore accepted the Sonrai proposal with respect to the City of Highland Park and Sonrai was awarded a contract by Lakeshore.

41. Lakeshore was awarded a contract with the City of Highland Park for the collection of waste, recycling and other refuse collection.

42. Sonrai installed its RFID Validation, Tracking and Event Monitoring Solution on Lakeshore equipment and Lakeshore implemented the system.

43. Sonrai provides services to Lakeshore with respect to the municipality of Highland Park, including data collection, management of the data, handling of events, event organization and providing access to data.

44. Lakeshore entered into negotiations with the City of Wheaton to secure a contract for the collection of waste, recycling and other refuse within the City of Wheaton.

45. On or about April, 2016 Lakeshore requested that Sonrai provide a presentation of the Sonrai RFID Validation, Tracking and Event Monitoring Solution for use with Lakeshore's proposal to the City of Wheaton.

46. On or about June 16, 2016, Sonrai provided a presentation to Lakeshore with respect to the City of Wheaton, including a PowerPoint presentation discussing the Sonrai RFID Validation, Tracking and Event Monitoring Solution.

47. On or around July 5, 2016, Lakeshore made a presentation to the City of Wheaton using slides from the April presentation made by Sonrai to Lakeshore. The presentation to the City of Wheaton included a description of the patented Sonrai RFID Validation, Tracking and Event Monitoring Solution, the subject of the '440 and '798 Patents.

48. The Sonrai trademark and logo appeared on at least two slides in the presentation made to the City of Wheaton by Lakeshore.

49. Based on the presentation, Lakeshore was awarded the contract for the collection of waste, recycling and other refuse collection.

50. Lakeshore, for a time, worked with Sonrai in the implementation of the Sonrai RFID Validation, Tracking and Event Monitoring Solution.

51. On or about August 26, 2016, Lakeshore informed Sonrai that it was going to implement an RFID Validation, Tracking and Event Monitoring Solution from AMCS rather than Sonrai.

52. Lakeshore intended to use Rehrig to deliver the containers within the City of Wheaton. And Lakeshore entered into a contract with Rehrig to implement RFID containers



within the City of Wheaton. Rehrig provides a description of its CARTS™ system which is a complete management system that tracks container inventory, repairs and work flow at household addresses and allows customers to maintain a database to track and manage collection data by using RFID technology. Rehrig and also instructs others now to utilize the CARTS™ system.

53. The specific terms of the contract provided for the use of Plaintiffs' patented RFID Validation, Tracking and Event Monitoring Solution.

54. Lakeshore later exploited Plaintiffs' patented RFID Validation, Tracking and Event Monitoring Solution by soliciting – and receiving – a contract with the City of Wheaton to provide garbage, yard waste and recycling collection service that utilized Plaintiffs' RFID Validation, Tracking and Event Monitoring Solution, though only after cutting Plaintiffs out of the deal.

55. Bill Kenney, Lakeshore's municipal and marketing manager, declined to name the makes and models of the RFID tags and readers his company used in its bid to Wheaton, when in actuality it was Plaintiff's technology used through a partnership with AMCS.

56. Lakeshore, AMCS and Rehrig knew of the '440 and '798 Patents prior to the time Lakeshore selected AMCS and Rehrig to provide services with respect to the City of Wheaton.

**FIRST CLAIM FOR INFRINGEMENT**  
**(Infringement of U.S. Patent No. 8,146,798 by Lakeshore)**

57. ACES and Sonrai incorporate by reference the allegations set forth in Paragraphs 1 to 56 above.

58. Lakeshore has infringed at least Claim 1 of the '798 Patent through its use of the patented method through its tracking of a large number of refuse containers within a municipality, including the City of Wheaton and elsewhere.

59. Claim 1 of the '798 Patent is recited as follows:

A method for a municipality to track the condition, pick-up, and general use of a large number of refuse containers among its citizens and businesses, the method comprising the steps of:

requiring a permit for use of a multi-use waste receptacle wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions;

issuing the permit in the form of a passive radio frequency identification tag having a unique identifier associated therewith to a permit applicant wherein the passive radio frequency identification tag includes means for attachment to the multi-use waste receptacle;

associating the unique identifier with biographical information associated with the permit applicant;

establishing a permit type associated with a type of waste to be deposited in the multi-use receptacle;

associating the permit type with the permit;

establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants;

requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle;

making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the permit type associated with the permit attached thereto; and

providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user.

60. Lakeshore implements a system within its equipment that practices the method for tracking the conditions, pick-up and general use of a large number of refuse containers in at least the City of Wheaton.

61. Lakeshore practices the step of “requiring a permit for use of a multi-use waste receptacle wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions”, as stated on the City of Wheaton website ([www.lrsrecycles.com](http://www.lrsrecycles.com)): “Lakeshore Recycling Systems will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pick-up based on the site of your cart.”

62. Lakeshore implements a system within its equipment that practices the step of “issuing the permit in the form of a passive radio frequency identification tag having a unique identifier associated therewith to a permit applicant wherein the passive radio frequency identification tag includes means for attachment to the multi-use waste receptacle” as recited in Claim 1 of the ‘798 Patent. Lakeshore “is using EPC Gen 2 Tags and readers to track usage of the waste-collection services it provides to the cities of Wheaton and Highland Park.” ([www.rfidjournal.com](http://www.rfidjournal.com): “In Illinois, RFID makes it easier for Residents to Pay as They Throw”). The permit is in the form of a passive EPC Gen 2 UHF RFID Tag that is embedded in each trash or recyclable carts.

63. Lakeshore implements a system within its equipment that practices the step of “associating the unique identifier with biographical information associated with the permit applicant.” Lakeshore uses a “unique ID number encoded to each RFID Tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing on

its own server. When a customer acquires a cart, LRS inputs the cart's ID along with that individual's billing address." ([www.rfidjournal.com](http://www.rfidjournal.com)).

64. Lakeshore implements a system within its equipment that practices the step of "establishing permit type associated with a type of waste to be deposited in the multi-use receptacle", as recited in Claim 1 of the '798 Patent. In the Lakeshore system, the unique ID number encoded to each RFID Tag is linked to its size and type of waste to be deposited in the multi-use receptacle. ([www.rfidjournal.com](http://www.rfidjournal.com); [www.amcsgroup.com/amcs-on-vehicle-technology.com](http://www.amcsgroup.com/amcs-on-vehicle-technology.com)).

65. Lakeshore implements a system within its equipment that practices the step of "associating the permit type with the permit", as recited in Claim 1 of the '798 Patent. In the Lakeshore system, the unique RFID number is linked to at least the size of the container and the type of waste.

66. Lakeshore implements a system within its equipment that practices the step of "establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants", as recited in Claim of the '798 Patent. The Lakeshore system:

"The unique ID number encoded to each RFID tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems' software residing in its own server. When a consumer acquires a cart, LRS inputs the cart's ID along with that individual's billing address."

([www.rfidjournal.com](http://www.rfidjournal.com); [www.lrsrecycles.com](http://www.lrsrecycles.com)).

67. Lakeshore implements a system within its equipment that practices the step of "establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical

information associated with a corresponding plurality of permit applicants” in Claim of the ‘798 Patent. The Lakeshore system allows for asset tracking and data collection management. The record of a customer’s RFID signal is maintained by Lakeshore, and the data collected is used to associate the RFID tag information with the customer.

68. Lakeshore implements a system within its equipment that practices the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘798 Patent. The RFID tags are attached to the receptacles and remain attached after several loadings and empties of refuse within the receptacles.

69. Lakeshore implements a system within its equipment that practices the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the permit type associated with the permit attached thereto” in Claim 1 of the ‘798 Patent. In the Lakeshore system, the RFID tag technology provides for making a determination whether the container is in compliance with a permit, for example, for Lakeshore may deny service when the RFID tag is read by the equipment. ([www.rfidjournal.com](http://www.rfidjournal.com)).

70. Lakeshore implements a system within its equipment that practices the step of “providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user” in Claim 1 of the ‘798 Patent. Lakeshore utilizes a handheld device that reads the RFID tag and communicates the

database. The handheld device receives from and transmits information to the electronic accessible database. (Lakeshore Presentation to the City of Wheaton).

71. Lakeshore also infringes dependent Claims 2, 3 and 8 of the '798 Patent.

72. Lakeshore provides for a central computer whereby the unique identifier from the cart is input into the computer.

73. Lakeshore implements a system that uses software on the computer to associate the unique identifier with biographical information of the residents.

74. Lakeshore's infringement of one or more claims of the '798 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

75. Lakeshore's actions of infringement of the '798 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

76. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by Lakeshore.

77. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**SECOND CLAIM FOR INFRINGEMENT  
(Infringement of U.S. Patent No. 8,714,440)**

78. ACES and Sonrai incorporate by reference the allegations set forth in Paragraphs 1 to 77 above.

79. On May 6, 2014, the '440 Patent, entitled "Method And Apparatus For Monitoring Waste Removal And Administration" was duly and legally issued by the United States Patent and Trademark Office. The '440 Patent is a continuation of the '798 Patent.

80. Lakeshore has infringed at least Claim 1 of the '440 Patent through its use of the patented method through its tracking of a large number of refuse containers within a municipality, including the City of Wheaton and elsewhere.

81. Lakeshore has infringed at least Claim 1 of the '440 Patent through its use of the patented method through its tracking of the condition, pick-up and general use of a large number of refuse containers within a municipality, including the City of Wheaton and elsewhere.

82. Claim 1 of the '440 Patent is recited as follows:

A method for a municipality to track the condition, pick-up, and general use of a large number of refuse containers among its citizens and businesses, the method comprising the steps of:

permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions;

establishing a plurality of multi-use receptacle use types; associating a passive radio frequency identification tag having a unique identifier associated therewith with each multi-use waste receptacle;

associating a use type with each passive radio frequency identification tag;

establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of the plurality of unique identifiers with biographical information associated with a corresponding member of the plurality of residents;

requiring attachment of the passive radio frequency identification tag to a receptacle associated with a resident wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle;

making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the use type associated with the passive radio frequency identification tag attached thereto;

and operating a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the

unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user.

83. Lakeshore implements a system within its equipment that practices the method for tracking the conditions, pick-up and general use of a large number of refuse containers with a municipality, including at least the City of Wheaton.

84. Lakeshore practices the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions.” As stated on the City of Wheaton website: “Lakeshore Recycling Systems will use radio frequency identification (RFID) tags attached to your garbage and recycling carts to wirelessly scan the cart and then charge you a fee per pick-up based on the site of your cart.” ([www.wheaton.il.us/residents/garbage](http://www.wheaton.il.us/residents/garbage)).

85. Lakeshore implements a system within its equipment that practices the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions” as recited in Claim 1 of the ‘440 Patent. The Illinois City of Wheaton is the latest municipality to adopt an RFID-based waste-tracking system from Lakeshore Recycling Systems (LRS). The city signed a five-year contract that encompasses collection of residential trash and recyclables and the tracking of each customer’s bin via an RFID tag attached to it. As stated on the City of Wheaton website, “you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pickup based on the size of your carts.” ([www.wheaton.il.us/residents/garbage](http://www.wheaton.il.us/residents/garbage)).



86. Lakeshore implements a system within its equipment that practices the step of “establishing a plurality of multi-use receptacle use types” as recited in Claim 1 of the ‘440 Patent. As stated on the City of Wheaton website, “you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pickup based on the size of your carts.” (*www.wheaton.il.us*).

87. Lakeshore implements a system within its equipment that practices the step of “associating a passive radio frequency identification tag having a unique identifier associated therewith with each multi-use waste receptacle” as recited in Claim 1 of the ‘440 Patent. In the Lakeshore Recycling System, the unique ID number encoded to each RFID tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing in its own server. When a consumer acquires a cart, Lakeshore Recycling Systems inputs the cart’s ID along with that individual’s billing address. (*www.wheaton.il.us*).

88. Lakeshore implements a system in its equipment that practices the step of “associating a use type with each passive radio frequency identification tag” as recited in Claim 1 of the ‘440 Patent. The City of Wheaton explained the Lakeshore Recycling System as follows:

you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pickup based on the size of your carts.

(*www.wheaton.il.us*).

89. Lakeshore implements a system in its equipment that practices the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of the plurality of unique identifiers with biographical information associated with a corresponding member of the plurality of residents” as recited in Claim 1 of the ‘440 Patent. Lakeshore establishes an external database to the passive radio frequency using its own server:

the unique ID number encoded to each RFID tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing in its own server. When a consumer acquires a cart, Lakeshore Recycling Systems inputs the cart’s ID along with that individual’s billing address.

*(www.rfidjournal.com).*

90. The Lakeshore system allows for asset tracking and data collection management. The record of a customer’s RFID signal is maintained by Lakeshore, and the data collected is used to associate the RFID tag information with the customer.

91. Lakeshore implements a system that practices the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘440 Patent. The RFID tags are attached to the receptacle and remain attached after several loadings and empties of refuse within the receptacle in the Lakeshore system.

92. Lakeshore implements a system within its equipment that practices the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the use type associated with the passive radio frequency identification tag attached thereto” in Claim 1 of the ‘440 Patent. In the Lakeshore system, the RFID tag

technology provides for Lakeshore to make a determination of whether a receptacle is in compliance with the use type and permit Lakeshore to deny service when the RFID tag is not in compliance.

93. Lakeshore implements a system within its equipment that practices the step of “providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user” in Claim 1 of the ‘440 Patent. Lakeshore utilizes a handheld device that reads the RFID tag and communicates a database. The handheld device receives information from and transmits information to the electronic accessible database. (Presentation made by Lakeshore to the City of Wheaton).

94. Lakeshore also infringes dependent Claims 2, 3, 4 and 7 of the ‘440 Patent.

95. Lakeshore provides for a central computer whereby the unique identifier from the cart is input into the computer.

96. Lakeshore implements a system that uses software on the computer to associate the unique identifier with biographical information of the residents.

97. Lakeshore’s infringement one or more claims of the ‘440 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

98. Lakeshore’s actions of infringement of the ‘440 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

99. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by Lakeshore.

100. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**THIRD CLAIM FOR INFRINGEMENT**  
**(Infringement of U.S. Patent No. 8,146,798 by AMCS)**

101. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 100 above.

102. AMCS has induced the infringement of the '798 Patent by instructing and causing Lakeshore to practice at least one claim of the '798 Patent, while having received actual notice about the '798 Patent.

103. AMCS has RFID technology to help municipalities manage their pickup routes, as well as enable accurate billing and reject services onsite for unpaid accounts. "The most recent functionality being offered with the [AMCS] RFID system enables drivers of trash-collection trucks to determine if a customer has not paid his or her bills, and to then send a text message to that individual, and automatically reject a bin being lifted at that location until the bill is paid."

104. AMCS has provided Lakeshore with an RFID tagging system for use on waste receptacles. The RFID system provided by AMCS utilizes a permit that has a unique identifier associated with a container.

105. AMCS instructed Lakeshore on how to use its On-Vehicle technology in a manner that infringes Claim 1 of the '798 Patent.

106. AMCS was provided actual notice of the '798 Patent by Plaintiffs.

107. AMCS has induced and/or contributed to the infringement of Claim 1 of the '798 Patent by providing On-Vehicle technology that includes fleet tracking, and weighing of RCV and FEL.

108. AMCS sells and offers to sell on-vehicle technology that includes RFID and other components, which are components used to infringe the '798 Patent, knowing the same to be especially made or especially adapted for use in an infringement of the '798 Patent. The on-vehicle technology that includes RFID and other components sold and offered for sale are not staple articles or commodity of commerce suitable for substantial non-infringing use.

109. Lakeshore directly infringes Claims 1, 2, 3, 4 and 8 of the '798 Patent.

110. There is direct infringement of the '798 Patent utilizing the AMCS System in at least Wheaton, Illinois and Grand Rapids, Michigan.

111. AMCS along with others, including Lakeshore, directly infringed at least Claims 1, 2, 3, 4 and 8 of the '798 Patent, within the meaning of 35 U.S.C. § 271(a) by jointly performing all the steps, pursuant to a joint venture or agency relationship.

112. AMCS has induced and contributed infringement of Claim 1 of the '798 Patent by instructing others to use and providing a system to weigh the data collected regarding each individual customers, implementing a stop list for unpaid customers and implementing a stop list on collecting bins or containers based upon a preselected condition.

113. AMCS contributes to and/or induces the infringement of the '798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of "requiring a permit for use of a multi-use waste receptacle wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions", as stated on its website regarding the on-vehicle technology solution that "AMCS on-vehicle technology has registered

over 5 million bins and has been fitted on over 5,000 vehicles across local authorities and private recycling and waste management companies.” ([www.amcsgroup.com/amcs-on-vehicle-technology](http://www.amcsgroup.com/amcs-on-vehicle-technology)).

114. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “issuing the permit in the form of a passive radio frequency identification tag having a unique identifier associated therewith to a permit applicant wherein the passive radio frequency identification tag includes means for attachment to the multi-use waste receptacle.” AMCS operates to supply and program the RFID tags by issuing “EPC Gen 2 Tags and readers to track usage of the waste-collection services it provides to the cities of Wheaton and Highland Park.” ([www.rfidjournal.com](http://www.rfidjournal.com)). The permit is in the form of a passive EPC Gen 2 UHF RFID Tag that is embedded in each trash or recyclable carts. ([www.amcsgroup.com/amcs-rfid](http://www.amcsgroup.com/amcs-rfid)).

115. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “associating the unique identifier with biographical information associated with the permit applicant.” AMCS provides a system that utilizes a “unique ID number encoded to each RFID Tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing on its own server. When a customer acquires a cart, LRS inputs the cart’s ID along with that individual’s billing address.” ([www.rfidjournal.com](http://www.rfidjournal.com)).

116. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “establishing permit type associated with a type of waste to be deposited in the multi-use receptacle”, as recited in Claim 1 of the ‘798 Patent. AMCS provides a system that utilizes a

unique ID number encoded to each RFID Tag which is linked to its size and type of waste to be deposited in the multi-use receptacle. (AMCS On-Vehicle Technology).

117. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “associating the permit type with the permit”, as recited in Claim 1 of the ‘798 Patent. AMCS provides a system that utilizes a unique RFID number is linked to at least the size of the container and the type of waste. ([www.rfidjournal.com](http://www.rfidjournal.com)).

118. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants”, as recited in Claim of the ‘798 Patent. The system provided by AMCS practices the element as set forth on its website:

#### AMCS On-Vehicle Technology

#### RFID

The latest in RFID (Radio Frequency Identification) technology allows your organization to validate, monitor and optimize your collection!

By utilizing bins/containers with RFID technology you can:

Increase fleet efficiency

Provide proof of service

Data provided to back office real-time

Track precise # of lifts

When used with optional GPS, track exact location of bin

([www.amcsgroup.com/amcs-on-vehicle-technology](http://www.amcsgroup.com/amcs-on-vehicle-technology)).

119. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants” in Claim of the ‘798 Patent. AMCS provides a system that allows for asset tracking and data collection management. The record of a customer’s RFID signal is maintained by Lakeshore using the AMCS system, and the data collected is used to associate the RFID tag information with the customer. (AMCS Tracker and IO – On-Vehicle Fleet Tracking).

120. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘798 Patent. The RFID tags utilized in the AMCS system implemented by Lakeshore are attached to the receptacle and remains attached after several loadings and empties of refuse within the receptacle. ([www.wheaton.il.us](http://www.wheaton.il.us)).

121. AMCS contributes to and/or induces the infringement of the ‘798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the permit type associated with the permit attached thereto” in Claim 1 of



the '798 Patent. In the AMCS system implemented by Lakeshore, the RFID tag technology provides for Lakeshore to deny service when the RFID tag is read by the equipment.

122. AMCS contributes to and/or induces the infringement of the '798 Patent by instructing others to use and providing Lakeshore with a system that practices the step of "providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user" in Claim 1 of the '798 Patent. Lakeshore utilizes a handheld device that reads the RFID tag and communicates the database. The handheld device receives from and transmits information to the electronic accessible database. ([www.amcsgroup.com/amcs-rfid](http://www.amcsgroup.com/amcs-rfid)).

123. For the reasons set forth above, AMCS contributes to and/or induces the dependent Claims 2, 3, 4 and 8 of the '798 Patent.

124. AMCS' continued infringement of one or more claims of the '798 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

125. AMCS' actions of infringement of the '798 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

126. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by AMCS.

127. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**FOURTH CLAIM FOR INFRINGEMENT  
(Infringement of U.S. Patent No. 8,714,440 by AMCS)**

128. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 127 above.

129. AMCS has induced and/or contributed to the infringement of the '798 Patent by causing Lakeshore to practice at least one claim of the '440 Patent, while having received actual notice about the '798 Patent.

130. AMCS instructs others to use and provides a system to Lakeshore that implements a system within its equipment that practices the method for tracking the conditions, pick-up and general use of a large number of refuse containers with a municipality, including at least the City of Wheaton.

131. AMCS was provided actual notice of the '440 Patent by Plaintiffs.

132. AMCS has induced and/or contributed to the infringement of Claim 1 of the '798 Patent by instructing others to use and providing On-Vehicle technology that includes fleet tracking and weighing of RCV and FEL.

133. AMCS sells and offers to sell on-vehicle technology that includes RFID and other components, which are components used to infringe the '440 Patent, knowing the same to be especially made or especially adapted for use in an infringement of the '440 Patent. The on-vehicle technology that includes RFID and other components sold and offered for sale are not staple articles or commodity of commerce suitable for substantial non-infringing use.

134. Lakeshore directly infringes Claims 1, 2, 3, 4 and 7 of the '440 Patent as set forth above.

135. There is direct infringement of the '440 Patent utilizing the AMCS System in at least Wheaton, Illinois and Lakeland, Florida.

136. AMCS along with others, including Lakeshore, directly infringe at least Claims 1, 2, 3, 4 and 7 of the '440 Patent within the meaning of 35 U.S.C. § 271(a) by jointly performing all the steps pursuant to a joint venture or agency relationship.

137. AMCS instructs others to use, and provides a system to Lakeshore that practices, the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions” as recited in Claim 1 of the '440 Patent. As stated on the City of Wheaton website: “Lakeshore Recycling Systems will use radio frequency identification (RFID) tags attached to your garbage and recycling carts to wirelessly scan the cart and then charge you a fee per pick-up based on the site of your cart.” The Lakeshore system is implemented provided by AMCS.

138. AMCS instructs others to use, and provides a system to Lakeshore that implements, a system that practices the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions” as recited in Claim 1 of the '440 Patent. The Illinois City of Wheaton is the latest municipality to adopt an RFID-based waste-tracking system from Lakeshore Recycling Systems (LRS). The city signed a five-year contract that encompasses collection of residential trash and recyclables and the tracking of each customer's bin via an RFID tag attached to it. As stated by the City of Wheaton, “you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to the garbage and recycling carts to wirelessly ‘scan’ the cart and then charge the residents a fee per pickup based on the size of your carts.” ([www.wheaton.il.us](http://www.wheaton.il.us)).

139. AMCS instructs others to use, and provides a system to Lakeshore that implements, a system that practices the step of “establishing a plurality of multi-use receptacle use types” as recited in Claim 1 of the ‘440 Patent. As stated by the City of Wheaton, “you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to the garbage and recycling carts to wirelessly ‘scan’ the cart and then charge the resident a fee per pickup based on the size of your carts.” ([www.wheaton.il.us](http://www.wheaton.il.us)).

140. AMCS instructs others to use, and provides a system to Lakeshore that implements, a system that practices the step of “associating a passive radio frequency identification tag having a unique identifier associated therewith with each multi-use waste receptacle” as recited in Claim 1 of the ‘440 Patent. In the AMCS system provided to Lakeshore, “the unique ID number encoded to each RFID tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing in its own server. When a consumer acquires a cart, Lakeshore Recycling Systems inputs the cart’s ID along with that individual’s billing address. The system is provided by AMCS.” ([www.rfidjournal.com](http://www.rfidjournal.com)).

141. AMCS instructs others to use, and provides a system to Lakeshore that implements, a system that practices the step of “associating a use type with each passive radio frequency identification tag” as recited in Claim 1 of the ‘440 Patent. The City of Wheaton explained the Lakeshore Recycling System as follows:

you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pickup based on the size of your carts.

*(www.wheaton.il.us).*

142. AMCS instructs others to use, and provides a system to Lakeshore that implements, a system that practices the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of the plurality of unique identifiers with biographical information associated with a corresponding member of the plurality of residents” as recited in Claim 1 of the ‘440 Patent. Lakeshore establishes an external database to the passive radio frequency using its own server that is implemented by AMCS:

the unique ID number encoded to each RFID tag is linked to its size and type of waste – recyclable or trash – in Lakeshore Recycling Systems’ software residing in its own server. When a consumer acquires a cart, Lakeshore Recycling Systems inputs the cart’s ID along with that individual’s billing address.

*(www.rfidjournal.com).*

143. AMCS instructs others to use, and provides a system to Lakeshore, that allows for asset tracking and data collection management. The record of a customer’s RFID signal is maintained by Lakeshore, and the data collected is used to associate the RFID tag information with the customer.

144. AMCS instructs others to use, and provides a system to Lakeshore that practices, the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘440 Patent. The RFID tags are attached to the receptacle and remains attached after several loadings and empties of refuse within the receptacle in the Lakeshore system.

145. AMCS instructs others to use, and provides a system to Lakeshore that practices, the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the use type associated with the passive radio frequency identification tag attached thereto” in Claim 1 of the ‘440 Patent. In the Lakeshore system, the RFID tag technology provides for Lakeshore to deny service when the RFID tag is read by the equipment. (*www.amcsgroup.com*: “Implementing a stop list on collection bins or containers over a certain weight” or for “unpaid customers”).

146. AMCS instructs others to use and provides a system to Lakeshore that practices the step of “providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user” in Claim 1 of the ‘440 Patent. The AMCS system provided to Lakeshore provides for the utilization of a handheld device that reads the RFID tag and communicates the database. The handheld device receives from and transmits information to the electronic accessible database. (*www.amcsgroup.com/amcs-rfid*).

147. For the reasons set forth above, AMCS contributes to and/or induces the dependent Claims 2, 3, 4 and 7 of the ‘440 Patent.

148. AMCS’ continued infringement of one or more claims of the ‘440 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

149. AMCS' actions of infringement of the '440 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

150. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by AMCS.

151. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**FIFTH CLAIM FOR INFRINGEMENT**  
**(Infringement of U.S. Patent No. 8,146,798 by Rehrig)**

152. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 151 above.

153. Rehrig received actual notice of the '798 Patent by letter dated June 8, 2016.

154. Rehrig knowingly induced AMCS and/or Lakeshore to infringe at least one claim of the '798 Patent within the meaning of 35 U.S.C. 271(b).

155. Rehrig specifically intended that its customers infringe the '798 Patent and knew that the customer's actions constituted infringement.

156. There is direct infringement of the '798 Patent utilizing the Rehrig carts in at least Wheaton, Illinois and Lakeland, Florida.

157. Additionally, Rehrig, along with at least Lakeshore, directly infringes at least Claims 1, 2, 3, 4 and 8 of the '798 Patent within the meaning of 35 U.S.C. § 271(a) by jointly performing all of the steps of the asserted claims pursuant to a joint venture or agency agreement.

158. Rehrig and Lakeshore have a contractual relationship regarding containers having RFID Tags.

159. Rehrig entered into a joint venture or contract with others who together performed all steps of at least Claims 1, 2, 3, 4 and 8 of the '798 Patent.

160. Rehrig entered into an agent relationship with others who together performed all steps of at least Claims 1, 2, 3, 4 and 8 of the '798 Patent.

161. The contractual relationship between Rehrig and others, including Lakeshore, mandates the performance of steps of the elements of Claims 1, 2, 3, 4 and 8 of the '798 Patent as set forth in ¶¶ 61 to 73 above.

162. Rehrig and others, including Lakeshore, have together carried out all steps of Claims 1, 2, 3, 4 and 8 of the '798 Patent.

163. Rehrig has induced the infringement of the '798 Patent by instructing and causing others, including Lakeshore, to practice at least one claim of the '798 Patent, after receiving actual notice about the '798 Patent.

164. Rehrig instructed others, including Lakeshore, on how to manage pickup routes, track vehicles to enable accurate billing and reject services onsite for unpaid accounts.

165. Rehrig has provided others, including Lakeshore, with instructions for an RFID tagging system for use on waste receptacles. The RFID instructions provided by Rehrig utilize a permit that has a unique identifier associated with a container.

166. Lakeshore directly infringes Claims 1, 2, 3, 4 and 8 of the '798 Patent.

167. Rehrig instructed others, including Lakeshore, on how to use its Environmental Services and Technology in a manner that infringes Claim 1 of the '798 Patent.

168. Rehrig has induced the infringement of Claim 1 of the '798 Patent by providing on-vehicle technology that includes the Container Asset Recovery and Tracking System ("C.A.R.T.S.").



169. Rehrig has induced infringement of Claim 1 of the '798 Patent by providing instructions to track, analyze and manage the data collected regarding customers using C.A.R.T.S..

170. Rehrig induces the infringement of the '798 Patent by providing instructions that practices the step of "requiring a permit for use of a multi-use waste receptacle wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions." Rehrig includes a permit as part of the multi-use waste carts that are repeatedly filled and emptied. (Rehrigpacific.com: "RFID container tracking and bar code integration") ("the Rehrig website").

171. Rehrig induces the infringement of the '798 Patent by providing instructions that practices the step of "issuing the permit in the form of a passive radio frequency identification tag having a unique identifier associated therewith to a permit applicant wherein the passive radio frequency identification tag includes means for attachment to the multi-use waste receptacle." Rehrig instructs its customers as follows: "Container Management: C.A.R.T.S. is a complete container management work order system that tracks container inventories (at multiple locations), repairs, and work flow at each household address and it will allow our customers to maintain an accurate account database to better control their assets and provide the foundation for tracking collection data with RFID." (White Paper from Rehrig Pacific Company: C.A.R.T.S.) ("White Paper").

172. Rehrig induces the infringement of the '798 Patent by providing instructions that practices the step of "associating the unique identifier with biographical information associated with the permit applicant." Rehrig instructs how to use a system that utilizes "a serial number

and bar code are imprinted on the container” and “associate bar code and RFID information with a specific customer.” (*www.rehrig.com*).

173. Rehrig induces the infringement of the ‘798 Patent by providing others, including Lakeshore, with a system that practices the step of “establishing permit type associated with a type of waste to be deposited in the multi-use receptacle”, as recited in Claim 1 of the ‘798 Patent. Rehrig provides instructions on how to that accurately track the collection data including household participation in recycling and refuse programs: “A data base with each container’s serial number and RFID tag value is provided as a foundation for future service offerings” and “accurately track collection data, including household participation in recycling and refuse programs.” (*www.rehrig.com*).

174. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “associating the permit type with the permit”, as recited in Claim 1 of the ‘798 Patent. Rehrig provides a system that utilizes a unique RFID number linked to at least the container and the type of waste, i.e. recycling or refuse. (*www.rehrig.com*).

175. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants”, as recited in Claim of the ‘798 Patent. Rehrig provides instructions to practice the element as set forth on its website: “The RFID systems on the collection vehicles transmit their data to C.A.R.T.S. either through a WiFi (data dump at the end of the collection day) or cellular (real time data transfer) network. The data is displayed in C.A.R.T.S. with various reports (Participation, Non-Participation, Tip History, Collection Time Study, etc.) available online to

our customers 24/7. All reports are 100% customizable to meet the program requirements.” (The White Paper).

176. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of a plurality of unique identifiers with biographical information associated with a corresponding plurality of permit applicants” in Claim of the ‘798 Patent. Rehrig provides instructions for allowing asset tracking and data collection management: “Collection Data Management and Service Monitoring – Rehrig Pacific’s all-in-one RFID Reader combined with the CARTS platform can enable you to better monitor your assets, increase operational efficiencies and proactively track your collection data, including participation in recycling and refuse programs.” (Rehrig Environmental Service and Technology Advertisement).

177. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘798 Patent. The RFID tags of Rehrig are attached to the receptacle and remains attached after several loadings and empties of refuse within the receptacle.

178. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the permit type associated with the permit attached thereto” in Claim 1 of the ‘798 Patent. The Rehrig RFID tag technology provides for automated

work order closure and improved accuracy: “Every Day Auditing’ with CARTS allows you to proactively track and prevent lost and stolen containers that may lead to non-paying accounts, while ensuring that container sizes match contracted service levels.” (Rehrig Environmental Service and Technology Advertisement).

179. Rehrig induces the infringement of the ‘798 Patent by providing instructions that practice the step of “providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user” in Claim 1 of the ‘798 Patent. Rehrig’s advertising depicts a handheld device that receives from and transmits information to the electronic accessible database: “CARTS™ gives you total control. This customizable web-based service verification, work order and inventory management application boosts operational visibility and allows you to oversee a wide variety of services that improves asset management, operational efficiencies and enhances the customer experience.” (Rehrig Advertisement).

180. Rehrig instructs others to issue a permit in the form of a passive radio frequency identification tag having a unique identifier associated therewith to a permit applicant wherein the passive radio frequency identification tag includes means for attachment to the multi-use waste receptacle.

181. Rehrig works with Lakeshore for the City of Wheaton to provide a variety of multi-use waste receptacles for the assembly and distribution of such carts being used in the patent method. For instance, a Wheaton resident selects carts through [www.wheatonrehrig.com](http://www.wheatonrehrig.com)

by entering or confirming a verification code and household information associated with a given cart. Rehrig thus enables these carts to be assembled and distributed with a passive radio frequency identification tag attached to the receptacle having a unique identifier associated therewith to a permit applicant.

182. For the reasons set forth above, Rehrig induces the infringement of the dependent Claims 2, 3, 4 and 8 of the '798 Patent.

183. Rehrig intended that others infringe Claim 1, 2, 3, 4 and 8 of the '798 Patent.

184. Rehrig's continued infringement of one or more claims of the '798 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

185. Rehrig's actions of infringement of the '798 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

186. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by Rehrig.

187. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**SIXTH CLAIM FOR INFRINGEMENT**  
**(Infringement of U.S. Patent No. 8,714,440 by Rehrig)**

188. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 187 above.

189. Rehrig received actual notice of the '440 Patent by letter dated June 28, 2016.

190. Rehrig knowingly induced AMCS and/or Lakeshore to infringe at least one claim of the '440 Patent.

191. Rehrig specifically intended that its customers infringe the '440 Patent and knew that the customer's actions constituted infringement.

192. There is direct infringement of the '440 Patent utilizing the Rehrig carts.

193. Rehrig, along with at least Lakeshore, directly infringe at least Claims 1, 2, 3, 4 and 7 of the '440 Patent.

194. Rehrig and Lakeshore have a contractual relationship regarding containers having RFID tags.

195. Rehrig entered into a joint venture with others, including Lakeshore, who together performed all steps of at least Claims 1, 2, 3, 4 and 7 of the '440 Patent.

196. Rehrig entered into an agency relationship with others, including Lakeshore, who together performed all steps of at least Claims 1, 2, 3, 4 and 7 of the '440 Patent.

197. The contractual relationship between Rehrig and at least Lakeshore mandates the performance of steps of the elements of Claims 1, 2, 3, 4 and 7 of the '440 Patent as set forth in ¶¶ 83 to 96 above.

198. Rehrig along with others, including Lakeshore, have together carried out all steps of Claims 1, 2, 3, 4 and 7 of the '440 Patent to directly infringe at least Claims 1, 2, 3, 4 and 7 of the '440 Patent by jointly performing all the steps of the asserted claims pursuant to a joint venture or relationship.

199. Lakeshore directly infringes Claims 1, 2, 3, 4 and 7 of the '440 Patent as set forth above.

200. Rehrig has induced the infringement of the '440 Patent by instructing and causing others, including Lakeshore, to practice at least one claim of the '440 Patent, after receiving actual notice about the '440 Patent.

201. Rehrig provides instructions on how to implement a system that practices the method for tracking the conditions, pick-up and general use of a large number of refuse containers with a municipality, including at least the City of Wheaton.

202. Rehrig has induced the infringement of Claim 1 of the '440 Patent by technology that includes fleet tracking and weighing:

“The RFID systems on the collection vehicles transmit their data to C.A.R.T.S. either through a WiFi (data dump at the end of the collection day) or cellular (real time data transfer) network. The data is displayed in C.A.R.T.S. with various reports (Participation, Non-Participation, Tip History, Collection Time Study), etc.) available online to our customers 24/7. All reports are 100% customizable to meet the program requirements.”

(Rehrig White Paper).

203. Rehrig instructs the practice of the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions” as recited in Claim 1 of the '440 Patent. Rehrig provides instructions regarding multi-use waste receptacles.

204. Rehrig provides instructions on how to implement a system that practices the step of “permitting use of a multi-use waste receptacle among a plurality of residents of a municipality wherein the multi-use waste receptacle is of a type filled and emptied on multiple occasions” as recited in Claim 1 of the '440 Patent. The Illinois City of Wheaton is the latest municipality to adopt an RFID-based waste-tracking system. The city signed a five-year contract that encompasses collection of residential trash and recyclables and the tracking of each customer's bin via an RFID tag attached to it. As stated by the City of Wheaton, “you will use the new garbage cart alongside the City-issued recycling cart you already have.” Rehrig supplied the Radio Frequency Identification (RFID) tags attached to the garbage and recycling

carts to wirelessly “scan” the cart and then charge the residents a fee per pickup based on the size of the carts.

205. Rehrig provides instruction to practice the step of “establishing a plurality of multi-use receptacle use types” as recited in Claim 1 of the ‘440 Patent. Rehrig instructs users to establish multi-use receptacle types:

“‘Every Day Auditing’ with CARTS allows you to proactively track and prevent lost and stolen containers that may lead to non-paying accounts, while ensuring that container sizes match contracted service levels.”

(Rehrig Advertisement).

206. Rehrig provides instruction that practices the step of “associating a passive radio frequency identification tag having a unique identifier associated therewith with each multi-use waste receptacle” as recited in Claim 1 of the ‘440 Patent. Rehrig instructs users to use the unique ID number encoded to each RFID tag:

“Bar codes and serial numbers are typically used to record container delivery or document maintenance work orders. RFID tags are utilized to record container collection data for refuse and recycling programs.”

([www.rehrig.com](http://www.rehrig.com)).

207. Rehrig provides instructions that practice the step of “associating a use type with each passive radio frequency identification tag” as recited in Claim 1 of the ‘440 Patent. The City of Wheaton explained the system as follows:

you will use the new garbage cart alongside the City-issued recycling cart you already have. Lakeshore Recycling System will use Radio Frequency Identification (RFID) tags attached to your garbage and recycling carts to wirelessly “scan” the cart and then charge you a fee per pickup based on the size of your carts.



([www.wheaton.il.us](http://www.wheaton.il.us)). Rehrig associates a use type with an identification tag: “Associate Bar Code and RFID information with a specific customer” and “accurately track collection data including household participation in recycling and refuse programs.” ([www.rehrig.com](http://www.rehrig.com)).

208. Rehrig instructs the users regarding the association of the type of use: “Collection Data Management and Service Monitoring – Rehrig Pacific’s all-in-one RFID Reader combined with the CARTS platform can enable you to better monitor your assets, increase operational efficiencies and proactively track your collection data, including participation in recycling and refuse programs.”

209. Rehrig provides instructions that practice the step of “establishing an electronically accessible database external to the passive radio frequency identification tag comprising an association of the plurality of unique identifiers with biographical information associated with a corresponding member of the plurality of residents” as recited in Claim 1 of the ‘440 Patent. Rehrig describes establishing an external database to the passive radio frequency using its own server:

**Container Management:** C.A.R.T.S. is a complete container management work order system that tracks container inventories (at multiple locations), repairs, and work flow at each household address and it will allow our customers to maintain an accurate account database to better control their assets and provide the foundation for tracking collection data with RFID.

(Rehrig White Paper).

210. Rehrig provides instructions for asset tracking and data collection management. The record of a customer’s RFID signal is maintained and the data collected is used to associate the RFID tag information with the customer:

“The RFID systems on the collection vehicles transmit their data to C.A.R.T.S. either through a WiFi (data dump at the end of the collection day) or cellular (real time data transfer) network. The data is displayed in C.A.R.T.S. with various reports (Participation, Non-Participation, Tip History, Collection Time Study),

etc.) available online to our customers 24/7. All reports are 100% customizable to meet the program requirements.”

“A data base with each container’s serial number and RFID tag value is provided as a foundation for future service offerings.”

(Rehrig White Paper).

211. Rehrig provides instructions that practices the step of “requiring attachment of the passive radio frequency identification tag to a receptacle of the permit applicant wherein the passive radio frequency identification tag remains attached to the receptacle subsequent to several loadings and empties of refuse within the receptacle” of Claim 1 of the ‘440 Patent. The RFID tags are attached to the receptacle and remains attached after several loadings and empties of refuse within the receptacle in the Rehrig containers: “A RFID tag is imbedded into the container to protect it from weather and other harsh elements” and “The RFID tag and bar code are scanned and linked at the manufacturing work cell.” (*www.rehrig.com*).

212. Rehrig provides instructions that practices the step of “making a determination whether use of a multi-use receptacle is in compliance or non-compliance based on the use type associated with the passive radio frequency identification tag attached thereto” in Claim 1 of the ‘440 Patent. The RFID tag technology provides for the user to deny service when the RFID tag is read by the equipment:

“‘Every Day Auditing’ with CARTS allows you to proactively track and prevent lost and stolen containers that may lead to non-paying accounts, while ensuring that container sizes match contracted service levels.”

(Rehrig Advertisement).

213. Rehrig provides instructions that practices the step of “providing a handheld device for communicating information regarding the determination, the handheld device comprising a reader for reading the unique identifier from the passive radio frequency

identification tag, a means for wireless communication with the database wherein the handheld device receives information from and transmits information to the electronically accessible database, and a display for displaying information to a user” in Claim 1 of the ‘440 Patent. Rehrig provides for the utilization of a handheld device that reads the RFID tag and communicates the database. (Rehrig Advertisement). Rehrig’s literature depicts the use of a handheld device which receives from and transmits information to the electronic accessible database:

“The RFID systems on the collection vehicles transmit their data to C.A.R.T.S. either through a WiFi (data dump at the end of the collection day) or cellular (real time data transfer) network. The data is displayed in C.A.R.T.S. with various reports (Participation, Non-Participation, Tip History, Collection Time Study, etc.) available online to our customers 24/7. All reports are 100% customizable to meet the program requirements.”

(Rehrig White Paper).

214. Rehrig has induced the infringement of the ‘440 Patent by instructing and causing at least Lakeshore to practice the Claim 1 of the ‘440 Patent.

215. Rehrig works with Lakeshore for the City of Wheaton to provide a variety of multi-use waste receptacles for the assembly and distribution of such carts being used in the patent method. Specifically, Rehrig works with at least Lakeshore and supports the implementation of a system within its equipment for at least the City of Wheaton to practices the step of “associating a passive radio frequency identification tag having a unique identifier associated therewith with each multi-use waste receptacle” as recited in Claim 1 of the ‘440 Patent. For instance, a Wheaton resident selects such carts through [www.wheatonrehrig.com](http://www.wheatonrehrig.com) by entering or confirming a verification code and household information associated with a given cart being selected. As a result, Rehrig’s assembly and distribution enables at least Lakeshore

to associate a passive RFID tag having a unique identifier associated therewith with each multi-use waste receptacle.

216. For the reasons set forth above, Rehrig induces the infringement of dependent Claims 2, 3, 4 and 7 of the '440 Patent.

217. Rehrig intended that others infringe Claims 1, 2, 3, 4 and 7 of the '440 Patent.

218. Rehrig's continued infringement of one or more claims of the '440 Patent entitles Plaintiffs to enhanced damages under 35 U.S.C. § 284.

219. Rehrig's actions of infringement of the '440 Patent have injured Plaintiffs and they are entitled to recover damages to compensate it for such infringement, but in no event less than a reasonable royalty as established under 35 U.S.C. § 284.

220. Plaintiffs' injury will continue unless or until this Court enters an injunction against further infringement by Rehrig.

221. Plaintiffs have complied with any applicable provisions of 35 U.S.C. § 287.

**SEVENTH CLAIM FOR INFRINGEMENT OF REGISTERED TRADEMARKS  
(LANHAM ACT § 32(a))**

222. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 221 above.

223. ACES owns and has a protectable interest in the registered Sonrai marks.

224. ACES has granted Sonrai the right to use the Sonrai marks.

225. As the owner of all rights in and to the Sonrai marks, ACES has standing to maintain an action for trademark infringement under the Lanham Act, including 32(a).

226. ACES and Sonrai use the Sonrai marks in connection with its RFID Validation, Tracking and Event Monitoring Solution. ACES and Sonrai have used the Sonrai marks

continuously since 2007. The Sonrai marks are fanciful and arbitrary and are associated in the mind of the public exclusively with ACES and Sonrai.

227. Lakeshore knowingly and intentionally used, and continues to use, the Sonrai marks in commerce. In one example, Lakeshore has used the Sonrai marks with the intention of misleading the City of Wheaton to believe that Lakeshore was going to use the Sonrai RFID Validation, Tracking and Event Monitoring Solution.

228. Lakeshore's unauthorized conduct has caused actual confusion, will continue to cause actual confusion, and creates at the very least a likelihood of confusion between the Sonrai and Lakeshore products.

**EIGHTH CLAIM FOR FALSE DESIGNATION OF ORIGIN & UNFAIR  
COMPETITION  
(LANHAM ACT § 43(a))**

229. Plaintiffs incorporate by reference all allegations set forth in Paragraphs 1 to 228 above.

230. ACES owns and has a protectable interest in the registered Sonrai marks.

231. Sonrai is an exclusive licensee of the Sonrai marks.

232. As owner of all substantive rights in and to the marks, Sonrai has standing to maintain an action for trademark infringement under the Lanham Act, including § 43(a).

233. Without authorization, Lakeshore has used and continues to use in commerce marks that are confusingly similar with Sonrai's marks, and/or have made false designations of origin which are likely to cause confusion or cause mistake or to deceive as to the affiliation, connection, or association of Lakeshore with Sonrai, and/or as to the origin, sponsorship or approval of Lakeshore's goods or services or commercial activities.

234. Lakeshore's conduct violates the Lanham Act, and Lakeshore has unfairly competed with and injured and, unless immediately restrained, will continue to injure Sonrai, causing damages to Sonrai in an amount to be determined at trial, and will cause irreparable injury to Sonrai's goodwill and reputation associated with the value of Sonrai's marks.

235. Lakeshore knew that its actions would cause confusion, mistake, or deception among purchasers, users, and the public.

236. Lakeshore's continuing and knowing use of Sonrai's marks constitutes false designation of origin and unfair competition in violation of § 43(a) of the Lanham Act, causing Sonrai to suffer substantial and irreparable injury for which it has no adequate remedy at law.

237. Lakeshore's wrongful conduct has permitted or will permit them to make substantial sales and profits on the strength of Sonrai's marketing, advertising, sales and consumer recognition. As a direct and proximate result of Lakeshore's wrongful conduct, as alleged herein, Sonrai and ACES have been and will be deprived of sales of its products in an amount as yet unknown but to be determined at trial, and has been deprived and will be deprived of the value of its marks as commercial assets in an amount as yet unknown but to be determined at trial. Sonrai seeks an accounting of Lakeshore's profits and request that the Court grant Sonrai three times that amount in the Court's discretion.

238. Based on Lakeshore's wrongful conduct, Sonrai and ACES are entitled to injunctive relief as well as monetary damages, and other remedies as provided by the Lanham Act, including Lakeshore's profits, treble damages, reasonable attorneys' fees, costs, and prejudgment interest.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs pray for the following relief:

- a. A judgment finding that Lakeshore, Rehrig and AMCS has infringed the '798 and '440 patents under 35 U.S.C. § 271(a), (b) and/or (c) as pled above;
- b. A judgment that the '798 and '440 Patents are valid and enforceable;
- c. A permanent injunction enjoining Lakeshore, Rehrig and AMCS, their agents, officers, assigns and others acting in concert with them, from infringing, inducing infringement of and/or contributing to infringement of the '798 and '440 Patents;
- d. An award of damages adequate to compensate Plaintiffs for the infringement of the '798 and '440 Patents that has occurred;
- e. An award of pre-judgment interest and post-judgment interest on the damages awarded;
- f. A judgment that Plaintiffs are entitled to an award of enhanced damages under 35 U.S.C. § 284 to be increased at the discretion of the trial court up to three times the damages found;
- g. A determination that this is an exceptional case and an award of Plaintiffs' attorneys' fees pursuant to 35 U.S.C. § 285 and any other applicable statute or law, and an award to Plaintiffs of its fees and costs;
- h. A judgment that Lakeshore infringed the Sonrai marks, within the meaning of Lanham Act § 32(a) and/or § 43(a);
- i. A permanent injunction enjoining Lakeshore's ongoing infringement of the Sonrai marks;
- j. All monetary damages allowable under the Lanham Act; and
- k. Such other further relief as the Court deems reasonable.

### **JURY DEMAND**

Plaintiffs demand a trial by jury on all issues so triable to a jury.

Respectfully submitted,

/s/Dean D. Niro

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