



May 12, 2021

Committee on Environment and Natural Resources  
c/o Legislative Information Office  
100 State House Station  
Augusta, ME 04333  
(Submitted Electronically)

Dear Co-Chairs Senator Brenner, Representative Tucker, and members of the Committee on Environment and Natural Resources:

We applaud the legislature's focus and thoughtful work in considering a producer responsibility framework for the state that aims to comprehensively improve the recycling system for the communities of Maine. While Digimarc is neutral on LD1541, we are submitting comments today to suggest language be included that ensures digital watermarking innovation can be considered as a tool in the design of a future producer responsibility program. As has been demonstrated through our work with the HolyGrail 1.0 and 2.0 initiatives in Europe, digital watermarking technology can aid consumer participation in recycling, enable material recovery facilities (MRFs) and plastics recyclers to perform more detailed material sortation, and bring value to the recycling system through efficiencies.

Digital watermarking can give plastics and other packaging a "digital recycling passport." In essence, it can turn waste objects into Internet of Things objects, linked to virtually unlimited information on the package's manufacturer, the specific product, resin type, whether there was prior food versus non-food contact, and other data that can improve sorting efficiency. And, digital watermark bypasses the need for a resin code, the issue at the heart of labeling discussion taking place in state legislatures across the nation. With such granular detail, facility operators can operate more efficiently, creating potential new waste streams and making recycling more profitable, particularly plastics recycling.

The consumer and system benefits are many. By scanning the package with a smartphone consumers can be informed of how to properly dispose of the item even based on their specific geo-location and waste collection provider. In short, with digital watermarking residents of



Maine could point their phone at a packaging item and be told if it falls within the list of accepted items in a community program. This will help garner greater consumer participation and increase collection to support the growing domestic demand for recycled content.

### *About our company*

Digimarc is a pioneer and world leader in digital watermarking. We are a publicly listed company on the NASDAQ exchange (DMRC) and based in Oregon since 1995. Our technology enables packaging manufacturers to create a digital identifier (watermark) in any type of printed label, package or plastic container. This digital identifier cannot be seen or discerned by consumers, but it can be detected by devices such as smartphones, front of store scanners, or sorting equipment at the MRF.

You experience Digimarc every day, many times we suspect. Our largest customer group is a consortium of world central banks, where we provide a means of deterring the counterfeiting of currencies. Our labeling technology is also included in most states drivers licenses as a means of authentication, and we have translated this powerful labeling technology to packaging. Digimarc also offers aural coding solutions as well, which is used in virtually all TV and radio in the US in broadcasts.

### *Inclusion of digital watermarking in LD1541*

Digital watermarking can further the stated recovery and recycling system improvement goals of LD1541. Section 6 (D) relates to calculating producer fees based on different environmental attributes of packaging including, “easily understandable recycling or disposal instructions for consumers or other design characteristics intended to reduce consumer confusion regarding recyclability and to reduce recycling contamination.” We suggest this section be amended with language that includes the ability to convey this information through traditional on package labeling *or* through use of an electronic or digital link.

We propose the language of Section 6 (D) be amended to read, “. . . *easily understandable recycling or disposal instructions for consumers or other design characteristics intended to reduce consumer confusion regarding recyclability and to reduce recycling contamination, **which may be conveyed through traditional labeling means or through the use of an electronic or digital link; and any other incentives designed to support the management of packaging material consistent with the solid waste management hierarchy in section 2101.***”

This slight modification ensures there is sufficient space for innovations in labeling as the system is further developed.

*Digital watermarking is already leading the way in Europe*

The potential of digital watermarking is being developed across Europe through the [Holy Grail 2.0](#) initiative, a consortium of more than 125 global brands and product stewardship organizations and with support of the Ellen MacArthur Foundation. The European Commission has published notification of digital watermarking even as a potential requirement for all packaging. In the U.S., there is also federal precedence for use of digital watermarking as an acceptable labeling method, specifically called out in the Federal Register for GMO labeling. The digital watermarking label enables consumers access to information regarding the GMO content of a product by simply pointing their smartphone cameras at the package.

With this amended language, LD1541 will ensure this technology can be considered as one of many labeling solutions that supports the growth of the recycling system in Maine. Additionally, we ask any future, or amended producer responsibility measures that directly address labeling be given similar consideration for digital watermarking innovation. We would be happy to supply any additional information on this technology, so please feel free to contact me with questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'R Chamness', written in a cursive style.

Robert P. Chamness  
EVP, Sustainability  
Digimarc Corporation