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Immediate Radio flux in GNOME Radio fields confirmed (June 14, 2021)

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Corresponding Author:	Ole Aamot Lovisenberg Diakonale Hospital: Lovisenberg Diakonale Sykehus AS OSLO, NORWAY
First Author:	Ole Aamot
Order of Authors:	Ole Aamot
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Abstract:	Electromagnetic waves are disturbances that provide the physical basis for light, radio and television waves, as well as infrared, ultraviolet and x ray waves discovered by Marie Curie. Visible light, audible radio, detectable x rays and other types of electromagnetic waves differ only in their frequency and wavelength. Electromagnetic waves as visible light from the stars of night has travelled without difficulty across tens or hundreds of light-years of (nearly) empty space and audible radio sound waves are travelling from stations such as WMBR at M.I.T. in Cambridge, MA in Boston up to distances larger than five thousand kilometers between Boston and Oslo where we as listeners on computers in Oslo can listen to sound waves recorded with a microphone on a computer in Boston between two continents in the world due to electromagnetic waves and the products from work in electrical engineering. Faraday's Law is named after the English scientist Michael Faraday (1791-1867) who first introduced the concept of field lines. He called them "lines of force" (Young/Freedman 2016), but the term "field lines" is preferable. An electric field line is an imaginary line or curve domain through a region of space so that its tangent at any point is in the direction of the electrical-field vector at that point. Electric field lines show the direction of the field E at each point and each electric field has a certain electric charger flow, a given electric flux.

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Ole Kr. Aamot
Department of Informatics
University of Oslo, Norway

June 14, 2021

Electromagnetic waves are disturbances that provide the physical basis for light, radio and television waves, as well as infrared, ultraviolet and x ray waves discovered by Marie Curie. Visible light, audible radio, detectable x rays and other types of electromagnetic waves differ only in their frequency and wavelength. Electromagnetic waves as visible light from the stars of night has travelled without difficulty across tens or hundreds of light-years of (nearly) empty space and audible radio sound waves are travelling from stations such as WMBR at M.I.T. in Cambridge, MA in Boston up to distances larger than five thousand kilometers between Boston and Oslo where we as listeners on computers in Oslo can listen to sound waves recorded with a microphone on a computer in Boston between two continents in the world due to electromagnetic waves and the products from work in electrical engineering. Faraday's Law is named after the English scientist Michael Faraday (1791-1867) who first introduced the concept of field lines. He called them "lines of force" (Young/Freedman 2016), but the term "field lines" is preferable. An electric field line is an imaginary line or curve domain through a region of space so that its tangent at any point is in the direction of the electrical-field vector at that point. Electric field lines show the direction of the field E at each point and each electric field has a certain electric charger flow, a given electric flux.

200 years ago Danish scientist Hans Christian Ørsted discovered the first evidence of the relationship of magnetism to moving charges as he found that a compass needle was deflected by a current-carrying wire. Ampère's Law, the relation of magnetism to moving charges discovered by André Ampère, inducing the displacement current discovered by James Clerk Maxwell, shows that a time-varying electric field acts as a source of magnetic fields, and is formulated in terms of the line integral of the magnetic field B around a closed path, denoted by Ampère's Law for magnetic flux. A few years later Michael Faraday in England and Joseph Henry in the United States discovered that moving a magnet near a conducting loop can cause a current in the loop. The mutual interaction between the two fields, electric and magnetic fields, is summarized in Maxwell's Equations. Faraday's Law tells us a time-varying magnetic field acts as a source of electric fields, while Ampère's Law shows that a time-varying electric field acts as a source of magnetic fields.

On June 12th 2020, based on the previous work towering in electrical en-

gineering done by Wim Taymans, Miguel de Icaza, Federico Mena, Linus Torvalds, Richard M. Stallman, John von Neumann, Alan Turing, James Clerk Maxwell, André-Marie Ampère, Hans Christian Ørsted and Michael Faraday, the GNOME Radio Flux was discovered.

The GNOME Radio Flux can be seen and heard for a radio field line visible on the screen of a GNU/Linux computer from Hewlett Packard installed with Debian 10, Fedora 32 or Ubuntu 20.04 LTS operating system that is running the gnome-internet-radio-locator software documented in the Bachelor's thesis Public Internet Radio Client for Accessing Free Audio Maps in Countries with Free Speech (Oslo Metropolitan University, June 2020) in Electrical Enginering.

The full paper, Bachelor's thesis report, essay, conference talks and software downloads and updates for Debian GNU/Linux 10, Fedora 32 and Ubuntu 20.04 are published on the GNOME Radio Project's website at www.gnomeradio.org and this author's homepage at home.ifi.uio.no/~olekaa/

The experiments with the GNOME Radio Flux that was discovered and observed on June 12th, 2020, based on the previous work towering in electrical engineering done by Wim Taymans, Miguel de Icaza, Federico Mena, Linus Torvalds, Richard M. Stallman, John von Neumann, Alan Turing, James Clerk Maxwell, André-Marie Ampère, Hans Christian Ørsted and Michael Faraday, was confirmed on Hewlett Packard hardware running Fedora Core 32 in Oslo, Norway on July 3th, 2020.

On June 14, 2021, Erik Valebrokk, the radio host of Stjernepose on NRK P13 confirmed that the NRK P13 radio show is immediate and he confirmed on Facebook that he believed that the radio stream was immediate.

Figure 1: Radio host Erik Valebrokk, June 14, 2021, NRK P13 (Oslo, Norway)

On perceptron.stream you will be able to listen to pre-historic and immediate recorded audio segment from computers with HTTP/1.1 206 Partial Content streaming of time-space-frequency intervals. Prototype example for Partial Content HTTP/1.1 GET Syntax for streaming a 8 minute buffer interval for no is `https://api.perceptron.stream/?notBefore=2021-06-14T09%3A00%3A0.0Z&notAfter=2021-06-14T11%3A00%3A0.0&label=NRK` The Multiple-Location Audio Recording 1.0 Specification itself will be documented and implemented in GNOME Gingerblue 1.0.0 in ANSI C and made available from `http://www.gingerblue.org/src/gingerblue-1.0.0.tar.xz` and x86_64 source and binary packages for Fedora Core 34 (`https://getfedora.org/`) in `http://www.gingerblue.org/~ole/fedora/` on February 1th, 2022, 2 weeks before thesis delivery time (February 15th, 2022).

See www.gingerblue.org and planet.gnome.org for details on the effort.