New Electromagnetism Addendum

By Robert J Distinti B.S. EE
46 Rutland Ave.
Fairfield Ct 06825.
(203) 331-9696 Contact@dsitinti.com

New Electromagnetism addendum

As time progresses and New Electromagnetism evolves, there come a need to update and revise the present literature on the website to keep it current with new developments and improvements in definitions.

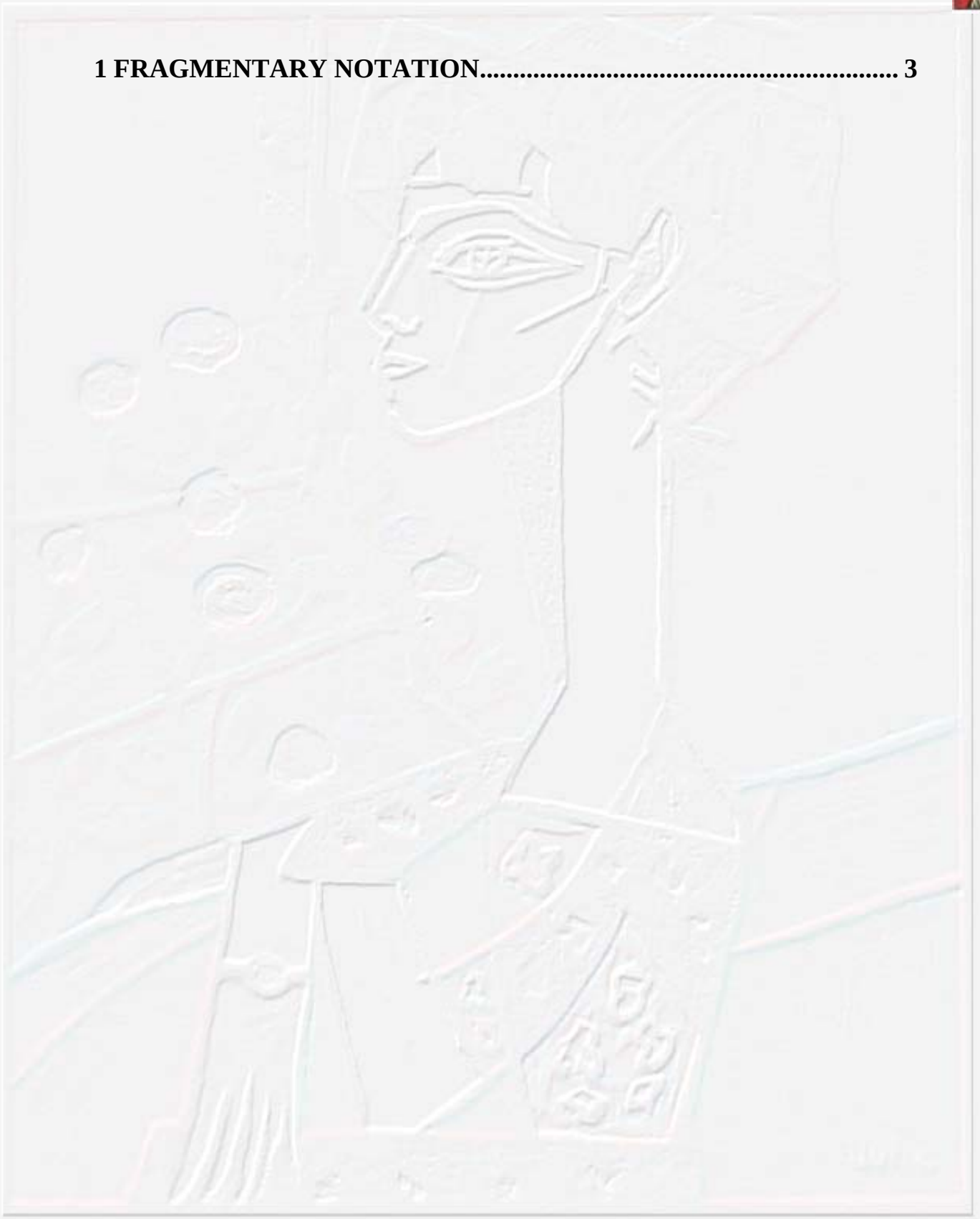
New Electromagnetism is more than a new set of mathematical models, it also includes more detailed definitions and constructs and electromagnetic phenomenon which enhance the range and usefulness of the new models. Such constructs include “Fragmentary Notation”, “Kinetic Voltage” and the like.

As time progresses and more definitions and constructs are required, it becomes apparent the previously devised constructs, notations and or definitions require improvement. Instead of applying these updates directly to the contents of the previous papers, the updates are to be cataloged in addendums such as this. This way the previous publications can remain historically intact and new publications can still reference them along with the addendum.

The Addendum presently includes the following

1) Improvement to Fragmentary Notation

NEM Addendum



1 Fragmentary Notation

In this addendum we further improve fragmentary Notations to prevent confusion as the complexity of New Electromagnetism grows.

The following papers contain original definitions and previous improvements for which the reader should be familiar with before going on

1) New Induction (ni.pdf) Appendix C
2) NE2 Fragments revision (ne2_fragments.pdf)

Both of the above papers can be found directly in
http://www.distinti.com/docs

In the prior usage, subscripts were employed to denote a fragmentary linkage as shown by the following

$$emf_{TS} = -K_M \left(\frac{dI_S}{dt} \right) \frac{d\mathbf{L}_S \bullet d\mathbf{L}_T}{|\mathbf{r}|}$$

In the above, the S and the T on the left hand side indicate that the right side needs to be integrated twice in order to obtain the full emf as follows

$$emf = \int_S \int_T emf_{TS}$$

Because we are eliminating the use of the term emf and replacing is with V_K, the plethora of subscripts becomes confusing. As such we are adopting a more standardized notation for fragmentary linkage which is:

$$d_S d_T V_K = -K_M \left(\frac{dI_S}{dt} \right) \frac{d\mathbf{L}_S \bullet d\mathbf{L}_T}{|\mathbf{r}|}$$

Whereas:

$$V_K = \int_S \int_T d_S d_T V_K = -K_M \int_S \int_T \left(\frac{dI_S}{dt} \right) \frac{d\mathbf{L}_S \bullet d\mathbf{L}_T}{|\mathbf{r}|}$$

NE Addendum

For explanation of V_K see New Magnetism (nm_bk000.pdf)