

Limitations in the Distribution of Public Performance Royalties in Ireland

Ron Healy and Joe Timoney

Department of Computer Science, National University of Ireland, Maynooth, Co. Kildare, Ireland

rhealy@cs.nuim.ie, jtimoney@cs.nuim.ie

Keywords:

Public performance copyright, broadcast monitoring, digital signal processing

ABSTRACT:

This paper provides an overview of the administration of Public Performance copyright in Ireland, while considering the motivation behind the introduction of Copyright legislation almost 300 years ago. We explore the idea that the administration of modern copyright helps to create the same environment that existed prior to legislation for copyright. We suggest a technological means by which the problems experienced by developing artists, in terms of the administration of public performance licensing, might be addressed.

INTRODUCTION:

In Ireland, the public performance (including broadcasting) of copyrighted material is governed by the "Copyright and Related Rights Act 2000". This piece of legislation, similar versions of which exist in most modern jurisdictions, affords owners of copyrighted material some form of protection and/or redress if their works are used without permission or for commercial gain. One of the most common implementations of the Copyright Act (as it is known in short) is music licensing. This may be for pre-recorded radio/television broadcast or for live performance, either as self-contained musical pieces, background pieces or advertisements etc.

There are many derivations of the concept of licensing but they all essentially revolve around the premise that the legal owner of a piece of music (who might not necessarily be the writer or composer of it) is entitled to fair recompense

if that music is used. This includes use for any performance in public.¹

The purpose of copyright legislation at the time it was initially legislated for and the role of copyright in the commercial and artistic development of the modern musician/singer are very different. Whereas early legislation was intended to prevent the exploitation of authors' works by what was then the perfectly legal reprinting and reselling of paper publications without recompense to the creator of the original, modern copyright administration can make no claim that it is preventing the exploitation of grass roots Musicians and Performing Artists.

Indeed, it can be shown by the monitoring of the output of broadcast media that the administration (if not the actual legislation) of rights by copyright collection societies actually causes, in the case of developing Artists, the same situation that led to the development of copyright legislation. Copyright legislation was introduced to protect the exploited, uninformed or under-represented creators of works. Today, the need is just as valid

This paper addresses the issues specifically relating to singers, songwriters and performing musicians and the issues discussed relate specifically to the Authors' understanding of the Irish music industry. However, these issues are likely to be replicated to a greater or lesser extent in the administration of public performance copyright in most developed jurisdictions, perhaps even more extremely in

¹ What constitutes 'public performance' may not always be obvious. There are legal definitions of what is considered 'public' in this regard. For example, a radio played in a home at the rear of a shop is considered a public performance if customers can hear it. Similarly, even played in a locked empty room, music has been legally held to be a 'public performance' because the sound travelled through a heating duct to a public area. www.imro.ie/faq/music_users.shtml

jurisdictions with recently developed intellectual property mechanisms.

EARLY COPYRIGHT LEGISLATION:

The first Copyright legislation dates back almost 300 years to the ‘Statute of Anne’ in 1710. In 1774, England’s ‘House of Lords’ heard that booksellers who were reprinting the works of others for their own gain had not ‘ever concerned themselves about authors, but had generally confined the substance of their prayers to the legislature, to the security of their own property’ [2]. Essentially, it was observed that those who didn’t want legislation introduced to protect creators of works were not concerned with the actual creators of works but with their own commercial interests. It might be suggested that this is still the motivation of those Companies in the Music Industry, as it should be. Copyright legislation was intended to address that issue, creating an environment where ‘literary works, like all others, will be undertaken and pursued with greater spirit, when, to the motives of public utility and fame, is added the inducement of private emolument’ [2]. This, then, is the basis for the development of modern copyright: that an author of a work has rights that s/he can choose to use, waive or limit and that the potential to profit from their work by availing of their rights is at least a partial incentive and affords the opportunity to further develop their creative works.

The original transcription of the “Statute of Anne” details the motivation of the legislation and states that it is because authors and creators rights were exploited “to their very great Detriment, and too often to the Ruin of them and their Families”. Legislation was therefore required to prevent exploitation that was previously causing financial and developmental difficulties for authors and creators while simultaneously providing a handsome income for those who were reproducing such works and selling them.

Of course, modern copyright legislation concerns itself in detail with the rights of the author and creator. It allows for groups of authors and creators to form a collective organisation to protect and administer their rights. All of this evolved out of early legislation and in this regard the current legislation is not necessarily flawed. However, it is the *administration* of such schemes that is creating a situation for large numbers of developing writers and performers that is no different to the time, 300 years ago, when their works are used, incidentally or accidentally in most cases, “to their very great detriment” and in a manner that essentially removes some of the motivation, as mentioned in [2], for artistic endeavour to be ‘pursued with greater spirit, when, to the motives of public utility and fame, is added the inducement of private emolument’.

PUBLIC PERFORMANCE IN IRELAND

In terms of real-world Irish implementations of copyright licensing of music, the most well-known licensing agent is IMRO – the Irish Music Rights Organisation. There are others, such as RAAP (Recorded Artists and Performers) and PPI (Phonographic Performers of Ireland). Contrary to popular misconception, even among its members, IMRO is not a statutory body, nor does it have any Regulatory position. It is simply a private company, authorised by the Controller of the Copyright Act, which exists to administer the licensing and publishing rights of its members – who are all either writers or publishers of music and related works. Similarly RAAP exists to administer rights for Performers (not writers, although they may be the same) while the PPI is a collective organisation representing the recording industry itself.

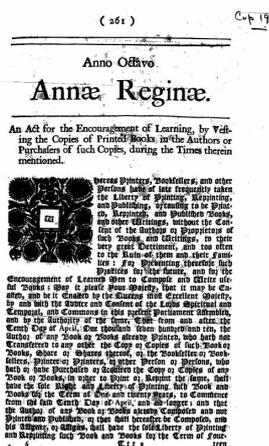


Fig 1: A reproduction of the first page of the ‘Statute of Anne’, considered the earliest Copyright legislation in the world [1]

In some jurisdictions, including currently the United States of America, the rights of *performers* to royalties when their recorded performances are used in radio and TV broadcasts are not protected in the same way as are the rights of *songwriters*. Notwithstanding this, there is legislation under debate in the US that seeks to address this limitation as it is an obvious exploitation of the rights of at least *some* of the creators of a work (i.e. the singers and performers on a recording, who are often not the writers of the work being performed).

In Ireland, any outlet that wishes to 'make available' works that are protected under the Copyright Act *and are owned by IMRO's members* must apply for a license to make those works available publicly. Similarly, outlets are required to obtain permission from the PPI (and thereby from RAAP) for public performances of the actual *performance* as IMRO members are not necessarily RAAP/PPI members and *vice versa*. A similar arrangement exists, or will exist, in most jurisdictions where legislation is enacted.

In this regard, outlets likely to require a license when 'making available' copyrighted works include radio and television broadcasters; public houses, hotels, and other venues where music is performed either live or pre-recorded; stores, workplaces and shopping centers where music is used in the background; in fact, almost any type of outlet where music can be heard by anyone other than in the 'domestic circle'. These outlets must all have permission from the collective rights societies to use their members' works.

What this means is that when an outlet negotiates a license to use music owned by members, the licensing agent (IMRO, PPI or RAAP) is obliged to add this money to the payments to be made to *all* of the owners of *all* of the music that is subsequently made available. The license fee received for a particular outlet over a given period should then be distributed pro-rata amongst all the members who have had their works made available *by that particular outlet and in the same ratio as these works were used*.

While this appropriation of license fees to owners may be a relatively simple task when a one-off license is sought, perhaps for a fireworks

display that is set to music, or for a live performance where the music is known and constant, it is not feasible for IMRO or any other Organisation to keep a complete and perfect record of all the pieces used in *all* of the outlets for whom it has issued licenses. They cannot therefore distribute the license fees received as Royalties to *all* of the correct owners in the correct ratios for each use of their work. IMRO readily admits this limitation.

There are, however, systems and processes in place to generate playlist data from outlets such as radio and television and then extrapolate the 'overall' statistics. This might seem like a good compromise and, in fact, it is a good system for established, well-informed and developed artists, writers and performers as their works are well known and adequately reported. Indeed, as will be illustrated, it is a system unfairly weighted in favour of the established sector but to the detriment of the developing group of artists, writers and performers.

Unfortunately, the limitations accidentally created by the systems and processes used by Organisations like IMRO are by definition likely to overlook a certain section of their members from the distribution of Royalties and, even disregarding the moral considerations, this leads to an ever-increasing disadvantage to this section of their membership. It is, moreover, this section of their membership that the entire concept of Copyright was evolved to protect.

By way of illustration of this point, consider the following scenario, which will no doubt be repeated in most jurisdictions to a greater or lesser degree:

If 'Song A' is played ten times on one broadcaster and does not appear in the data supplied by the station or collected by/for the Agent, while 'Song B' is played ten times and does appear in the data, then – all other things being equal – 'Song B' will generate more royalties than it is entitled to as it's share of the overall royalty pool will include some of the portion that otherwise should have been distributed for 'Song A'. Moreover, if Song 'B' is only played once, and this play is included in the sample data taken from broadcasters where the data is not complete and is instead extrapolated,

then song 'B' may well end up with rather large payouts (comparatively speaking) and some of these payouts would actually belong to the owner of song 'A'.

In terms of the more accessible "community radio" sector, IMRO and others find it is not economically viable to collect play data so they simply add the fees generated from community broadcasters to the large pool of license fees generated by the National broadcaster and its subsidiaries. This, of course, means that the radio plays that developing Artists and Writers *do* receive, which very often happen on easily-accessible community and local radio stations, will be overlooked and, instead, the royalties due to these developing Artists will be paid to the very well-known and usually very commercially aware Artists who are more often broadcast on the National broadcaster's channels, thereby exacerbating the already-limiting problems faced by developing Artists.

It does not take much of a leap of the imagination to realise that the more organised, informed and commercially aware Artists, Writers and Publishers etc will all be able to circumvent these limitations and requirements and will take steps to ensure that their works are properly recorded and reported to the distributing Agent, whether IMRO or any other similar organisation. Moreover, these commercially-aware sections of the membership are likely to be involved on a regular basis on the Music Industry as this is the only real way that such concepts come to light as far as Artists etc are concerned. Newcomers to the industry, particularly new Artists and Writers, are often woefully unaware of even what Copyright is, let alone how it is administered and so on. Even when they are (eventually) informed enough to have their works copyrighted and register as members of organisations like IMRO, they make the assumption, incorrectly, that these Agents will administer their rights perfectly. They do not. They cannot.

It is up to the Artist to ensure that they are paid the correct amount of Royalty from the 'pool' of any given license fee received. Of course, like IMRO and its peer organisations, Artists are even less able to monitor all radio and television output, as well as all publicly-aired music in all

shops and factories. They are therefore at the mercy of the collection societies who act as their agents. Given that more commercially-aware members will be actively submitting data to the Agent, and that the Agent's collection and distribution system is inherently weighted against the developing Artist, the disadvantage suffered through lack of awareness is magnified, often to the long-term detriment of Artists who see no return, even when relatively successful in terms of the Irish marketplace and allow their artistic development to be stifled, often when it warrants being pursued.

In order to overcome the problems caused by the systems currently used to collate information and then calculate distributions, and to make the entire process of collection and distribution of royalties fairer (albeit never perfect), in particular for works played less often and for specialist or developing musical works/ shows/ stations, a complete and accurate list of *all* works broadcast at *all* times on *all* stations needs to be made available. This is unlikely to ever be possible, but modern technology should be able to produce a system fairer than it currently is, whereby the entire license fee paid by a radio station may be distributed in its entirety to the owners of as little as 10% of the works broadcast in the full period ².

Moreover, a single payment-calculation metric should be used for the calculation of distributions. It is likely that the current multiple-metric calculation system (i.e. pay-per-play, pay-per-duration, pay-per-sample pay-per-audience size) has evolved because of the way in which data is reported to the Agent, rather than for any reason relating to the legal or moral fairness of the systems employed. It is also likely that the reason that some stations are sampled, some are full census and some are mixed is simply a result of the availability of data from those broadcasters and the reticence on the part of royalty collection agents to ensure and demand compliance with the duties of the music-users under current legislation.

² This is the case in stations where a two-day per month sample of data is used to calculate the entire distribution, with the assumption made that the rest of the month is likely to have included the same pieces. This is patently absurd, particularly in an ever-changing radio environment

Of course, other outlets licensed to publicly use copyrighted material, such as shops and factories, simply cannot be monitored at all so estimates and extrapolations are used to distribute the license fees collected from these groups of outlets. This is sometimes done using the same metric derived from the extrapolated data generated by incomplete radio and television playlist data, using the logic that a large number of outlets are going to be using radio and television for public performance anyway, without regard for those that might use CD, or those that never play music other than live music. There are always going to be limitations like this, but it is obvious that the more complete the available data is, the more accurate the distribution to members who own the works will be, which is a collection society's prime *raison d'être*.

THE CULTURAL AND FINANCIAL IMPACT

A knock-on effect of the development of a system that more accurately represents what is currently being broadcast by radio and television broadcasters would be the provision of a useful barometer for developing culture. More accurate representation of the relative popularity of Artists, developing and otherwise, in the data produced and therefore in the Royalty distribution pools, would lead to an increase in the amount of revenue currently generated by Royalties that eventually stays in Ireland and trickles down to developing Artists and Performers. This can only be good for the Irish Music Industry in general and is likely to cause a spiral effect where more revenue in the lower levels of the Industry leads to more successful Artists in the medium term, in turn leading to more revenue staying in Ireland.

Given that IMRO alone generated circa €36.8 million in license fees in 2007 [3] and that the European collective rights sector is worth more than €5 billion per annum, the revenue is not insubstantial [4].

An interesting further development of such a modernized, automated, digital system designed to monitor the output of traditional radio and television broadcasters is that it would be a very easy task to extend its operation to the area of

digital radio, which is already a digital medium. One of the issues that must be dealt with when trying to create a digital watermarking scheme is that the traditional broadcast environment is an analogue medium. Digital information cannot be easily transmitted as a side-channel to the music etc that is being broadcast. In digital radio transmissions, also, some of the processing requirements would be unnecessary (for example, converting analogue signals to digital) and much of the interference suffered by analogue transmissions would be lessened if not eradicated. This makes watermarking more likely to increase in accuracy.

It would then be a simple task to scale the system to monitor the output of International broadcasters. Why is this important? There are some interesting statistics which serve to illustrate the reasons and the potential scale of the long-term benefit to the members of IMRO/RAPP and the Irish economy in general:

1. The Royalty collection Industry in Europe alone is worth an estimated €5 Billion in 2004 and is increasing in size. This excludes the rest of the World. China is currently undergoing a shift to an economy that protects intellectual property, while the USA is considering extending its public performance legislation to include performers, not just writers.
2. IMRO collects only approximately €3.3 million in royalties from affiliated Organisations in the rest of Europe (including the UK) in 2007 [3], suggesting that Irish-originated content accounted for only a fraction of one percent of radio/television output and live performances in these jurisdictions. Given the success of Irish-originated Artists, this is obviously open to debate, particularly in the US and UK which both have much larger royalty revenues generated from broadcast sources. IMRO itself admits that it faces major obstacles trying to recover royalties for its members from public performances abroad because it cannot quantify them.
3. In the UK market, 'Irish-originated' Artists were recently ranked a cumulative third place in the overall sales statistics [5] in

all of the years from 1986 – 1994, except 1989 when Irish Artists were ranked 4th overall in terms of sales. It is also claimed in [5] that Irish artists are considered by Industry observers to be the 5th highest ranked demographic in terms of combined International repertoire. If radio output reflects, to an extent, repertoire and sales statistics then it would be logical to assume that Irish-originated Artists made up a comparatively large proportion of public-performances in, at least, the UK and the US. From IMRO's annual results, it is apparent that – especially 10 years on from these statistics – income from UK public-performance royalties should be a lot higher than the €1.5 million shown in their 2007 results. Similarly, one might expect the figures for other jurisdictions to be higher than €450,000 (USA), €900,000 (EU countries combined), €400,000 (Rest of the world)

4. According to the Music Industry governing body, *"Revenues from public performance and broadcasting income grow incrementally every year"*³ so there is ever more reason for both more accurate and more widespread public-performance playlist data³.

5. *"The fact that Irish people use English is often cited as increasing our vulnerability to Anglo-American mass culture. This is so, but it also increases our opportunities in the vast English-speaking market, the most affluent in the World"* (former Irish Cultural Minister Michael D. Higgins, 1999)

6. The fact that there is a huge Diaspora of Irish people and their descendents, particularly in the UK and US, would lead to the inevitable conclusion that a disproportionate percentage of the output from their broadcasters would have some Irish content, in comparison to the output of other demographic sectors and the owners of this content are legally entitled to fair recompense for such use.

The problem with all of the above is that there is no complete record of works broadcast. There is nothing in legislation that suggests that owners of the copyright of any work can be treated any differently than the owners of another work, in the same jurisdiction. In fact, that would be patently unfair. Therefore, the owners of content broadcast on UK and US channels are entitled to the same royalty rate no matter what their Nationality.

Conversely, the owners of content broadcast by Irish broadcasters are entitled to the appropriate royalty according to the percentage of works that they own. Therein lies one of the potential obstacles to such a system.

Irish radio output does not generally consist of Irish material. This is not a secret. In fact, the legislation that governs the issuing of broadcast licenses specifically includes provisions for license applicants to allocate a percentage of their output for 'Irish' content. This 'Irish' content does not only include music but also current affairs, talk shows etc. The percentage of 'Irish' content required in many cases is 20%. Again, this is not music. A broadcaster may decide to honour the requirement for 20% Irish content with 20% of their output being News, Chat shows, Current affairs. Of their music, it might be 100% non-Irish. Also, some broadcasters do not have this requirement attached to their license so their Irish output could theoretically be nil. A casual observation of the playlist of any commercial radio station, including the National Broadcaster (RTE) will illustrate that a very large proportion of their output is International, mostly originating in the UK and US as would be expected.

This would suggest that the collective rights societies that operate in the Irish industry would be expected to distribute their collected license fees to a proportion of non-Irish content owners. One might estimate that as much as 80% of royalties generated by Irish collective rights agents actually does not belong to any Irish content owner and should therefore be transferred to affiliates abroad. For IMRO, that would amount to approximately €26 million of the €33 million it generated in Ireland in 2007.

³ From "The threat becomes the opportunity", speech by John Kennedy, CEO and Chairman IFPI, MIDEMNET Keynote speech, 22 January 2005
http://www.ifpi.org/content/section_views/view013.html

This is, naturally, an unpalatable possibility for the Irish industry. However, it is likely that if the broadcast data provided were more complete and accurate Internationally, especially given the size of the EU and US markets, we might expect to see a rather large net inflow to Ireland.

The combined total generated by collection societies for Authors, Producers, Publishers and Performers in Europe alone was c€5 billion in 2004, and growing. France alone accounts for almost €1.25 billion in 2004 collection totals. The UK collected close to €850 million in Authors/Publishers royalties alone. If Irish content was to account for only 1% of the real ownership of the content that was used to generate UK royalties, then in 2004 the income due to Irish societies would have been €7.5 million. Instead, €1.3 million was collected.

Given that Irish-originated content is considered to be the 5th highest-ranked contributor to International repertoire and that UK sales output, which might be expected to somewhat reflect, or in some cases be reflected by, broadcast output from commercial broadcasters, for the period to 1994 (and presumably since then to a similar extent) ranked Irish content as cumulatively 3rd in sales, it would seem likely that Irish content on UK broadcasters would exceed 1%. Each additional 1% represents an increase on 2004 figures of €8.5 million in combined royalties. This, of course, pales almost into insignificance when the US and the Rest of the World are considered.

The likelihood is that, if a situation arose where perfect, accurate and complete broadcast data was available, the overall royalties due to Irish content owners – in the Music Publishing Industry alone – would far exceed the outflow from the Irish market.

HOW DOES WATERMARKING WORK?

At its very simplest, the concept of digital audio watermarking can be likened to the process whereby a watermark is added to a banknote to help prove its validity. In the digital era, many Internet users will be familiar with images reproduced on web pages with the photographer or copyright details superimposed on the actual image. In both cases, the idea of the watermark

is similar: validation of identification/authenticity. There are digital audio watermark techniques with the same motivation, namely validation of the identification of a piece of audio. However, watermarks in audio can be used for a wide range of purposes such as copy prevention, tracing of the source of illegal copies or simply adding information of value to audio.

In digital audio watermarking terms, the system requires that musical pieces can be 'marked' (preferably, if possible) before public release in such a way that the mark is difficult or impossible to hear and difficult or impossible to alter and that the piece can then be identified 'on the fly', in the real world. Recent developments in the areas of Digital Audio Fingerprinting and Digital Audio Watermarking have shown promise. Indeed, the current state of these research areas, allied with the ever-increasing processing power and throughput of modern communications systems, is such that there is no reason why a highly efficient automated watermarking system cannot be implemented today. This could be done either by a State body responsible for the monitoring and administration of Copyright royalties for audio (and, by extension, video) or, more likely, by IMRO and similar collective rights Organisations.

The administration of such a system might appear to be the proverbial nightmare, but compared to the current system of inaccurate incomplete and unfair distribution, these Organisations legally owe it to their members to do the best they can to produce data as accurately and completely as possible. Moreover, the cost of producing such data would rapidly decrease, while its inherent value (Airplay charts etc) would increase with completeness, both to its members as well as to the Entertainment Industry at large.

We have developed a technique which uses digital signal processing methods to manipulate the magnitude of no more than frequency components which are already present in a signal (the signal, in this case, being audio). Rather than adding audio components to the audio to be watermarked, which we achieved previously [6], we have recently developed a new technique that uses a new super-resolution frequency-identification method called *Complex*

Spectral Phase Evolution (CSPE) [7] to identify frequency components that are present in a piece of audio. We then modify the inherent components to represent the values we want to watermark into the audio [8] in a manner that would not be detectable to human listeners. This technique is superior to [6] as it does not add anything to the audio in the process of watermarking. In an Artistic endeavour such as song-writing and production, this is a very important consideration.

Once the components are modified, it would then be relatively easy to identify in the monitoring of the output of any broadcast medium by using the CSPE technique again. Identification of the content has been more than 99% accurate in earlier work and is expected to increase in accuracy and efficiency as the technique is developed.

CONCLUSION:

The current system for administering public performance copyright in Ireland and, to a greater or lesser extent, in other jurisdictions is inadequate in the digital era. These systems can operate to the detriment of under-informed and under-represented writers, performers and artists who are often in the early stages of their career development. Current systems may serve to exploit these people to the benefit of more established and well-represented peers. Modern Copyright administration is not protecting their rights any more than was the case before Copyright was legislated for.

In our work, the purpose of an added watermark is the monitoring of broadcast output by radio and TV to identify the broadcast item accurately before using the combined collected data for accurate distribution of royalties. Other uses such as publishing airplay statistics are, of course, possible once the data has been collected. The watermark 'channel' can be used to inaudibly encode the audio with added-value information such as lyrics and purchase details.

If the collection societies which make up the Irish royalty-collection industry were to take a lead in the development of an open-source, transparent and accountable measuring and reporting system based on digital audio

watermarking, then Irish Artists (meaning, by default, the more established and well-known members) could easily benefit exponentially from being at the forefront of this development by generating an increased inflow of revenues from European/Worldwide royalty revenues. Simultaneously, those developing and under-informed artists and writers for whom copyright is such an important career-enhancing tool, would be able to benefit from a more accurate distribution of royalties generated for the use of their material in Ireland. We have proposed a Digital audio watermarking technique that would permit this with low financial and computational cost and inconsequential impact on the audio being watermarked.

REFERENCES:

- [1] Karl-Erik Tallmo. "The Misunderstood Idea of Copyright", www.nisus.se/archive/050902e.html
- [2] Donaldson v. Beckett. "Proceedings in the Lords on the Question of Literary Property, February 4 through February 22, 1774". www.copyrighthistory.com/donaldson.html
- [3] "IMRO Annual Reports and Accounts", 2007.
- [4] "The Economy of Culture in Europe, Study prepared for the European Commission (Directorate-General for Education and Culture)" October 2006. Page 246.
- [5] Paula Clancy and Mary Twomey. "Clusters in Ireland: The Irish Popular Music Industry", published by the National Economic and Social Council, November 1997, page 7, para 3.
- [6] Ron Healy and Joe Timoney. "300 years of copyright: have we gone full circle", Social-Legal Studies Association Annual Conference, De Montfort University, Leicester, 7-9 April 2009.
- [7] K. M. Short and R. A. Garcia. "Signal Analysis using the Complex Spectral Phase Evolution (CSPE) Method", Audio Engineering Society 120th Convention, May 2006, Paris, France.
- [8] Jian Wang, Ron Healy and Joe Timoney. "Digital Audio Watermarking by Magnitude Modification of Frequency Components Using the CSPE Algorithm", China-Ireland International Conference on Information and Communications Technologies, Maynooth, Ireland, August 2009 (Accepted for Publication).