

Understanding Mosaic Rights – Key to a winning digital strategy

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Innovation is increasingly in the merging of different technologies, the creation of novel value constellations and in the establishment of new relationships within a given eco-system. One example of this trend, is the Internet of Things, but it is not the only one. Block-chain technology, artificial intelligence and nano-tech are further examples - each of which has the innovative potential, in the right constellation, to disrupt, re-configure and vastly improve a given economic activity. But one aspect is perhaps not considered enough. These technical and strategic innovations, are full of devices and data – and devices, the constellation of devices and the data produced by them, can be protected by intellectual property rights (IPR) including digital rights. What emerges, is a veritable mosaic of IPR and digital rights. So how can anyone – the configuring firm, suppliers, competitors and regulators – better design or even simply make sense of these “Mosaic Rights”?

Digitalisation and Mosaic Rights

This White Paper derives its strategic approach through the work of Richard Normann and his colleagues during the 1980's and 1990's. This approach is based on seeing value as inherently co-produced in systems. These “Value Creating Systems” focus on “offerings” that define relationships between the various actors in the system. This approach has consistently been reviewed, updated and implemented (EDF, Shell, Scania, SCA) ever since. Real world practise has shown the approach to be especially suited to value creating eco-systems, such as those in a digitalised environment. The latest publication, *Strategy For a Networked World* by Ramirez and Mannervik provides not just a theoretical basis for looking at these issues, but it also draws on Actor Network Theory (Callon, 2001; Latour, 2005; Law 2009) as a methodology to describe and visualise the nature of interactions in such systems.

It is this methodology that will be used in this White Paper to illustrate how *Mosaic Rights* can impact value creating systems. The illustrative example used is a digitalised burglar alarm for the home.

IoT home alarm 2.0

Alarms in the home exist for many reasons. Burglar alarms seek to prevent physical intruders from having access to items (or persons) of value. Smoke alarms seek to alert inhabitants as to the risk of fire. These alarms in turn may be

connected to external authorities such as the police or fire-brigade. In the IoT, the potential exists to bundle these different alarms into a functionality or offering of a centralised E-Home System such as Apple's Siri, Google Home and Amazon's Alexa. Such offerings require access to technology that can simulate human senses. Sight, sound, smell and touch. For the purposes of this White Paper, we limit ourselves to setting up a burglar alarm that can ‘hear’ and ‘see’.

Setting up a digitalised burglar alarm

What is required to set up a digitalised burglar alarm?

Who are the actors?

First and foremost, the alarm must fulfil some basic need. The different actors however have different needs. The home owner, and the other occupants or visitors, want a sense of security. The police have an interest in low criminality (public order issue) and minimising false alarms. Insurance companies and home owners are interested in effective, sustainable coverage. Insurance companies may offer home owners financial incentives to achieve this. The E-Home System supplier and the different actors required to enable the E-Home System to function as a burglar alarm want commercial success.

Using the Actor Network Theory, Figure 1 illustrates the main actors for a digitalised burglar alarm.

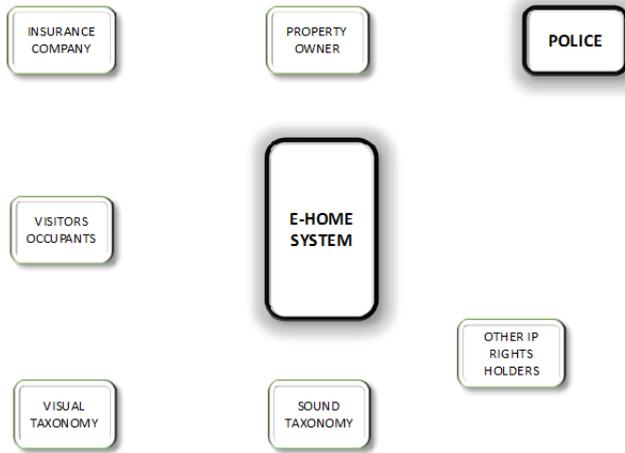


Figure 1. Main actors for setting up a digitalised burglar alarm.

The power of the Value Creating System thinking lies in its ability to visualise different values in the relationships between the actors – in this case using Actor Network Theory. It is the sum-total of these different relationships that establishes the effectiveness of a given Value Creating System.

Underpinning Value Creation Systems are a whole range of what Ramirez and Mannervik described as a support offerings. A support offering is embedded in the background of the Value Creating System, but it does not configure or organise it as such. In Figure 1 therefore, the payment system and the criminal justice system are support offerings and do not therefore appear as main actors in Figure 1 for setting up a digitalised burglar alarm.

Where does the money flow?

The next layer to look at is the accountancy view of the world. Where does the money go? Figure 2 shows the financial flows between the main actors.

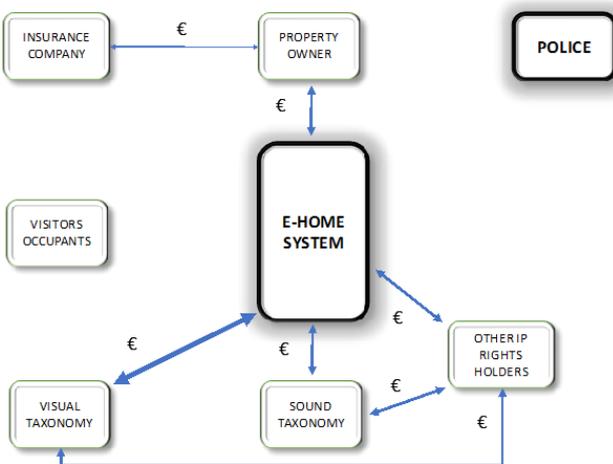


Figure 2. Financial flows between the main actors for setting up a digitalised burglar alarm.

What is immediately apparent from Figure 2 is that the financial flows on their own fail to describe adequately how the Value Creation System functions. Some actors, essential to the digitalised burglar alarm functionality, have no finan-

cial relationships with the other actors. And some financial relationships are optional such as the incentive to the home owner from the insurance company.

Mosaic Rights and the digitalised Value Creating System

To understand therefore how the Value Creation System functions, we need to look at other values being exchanged between the main actors.

Figure 3 illustrates the more complete picture.

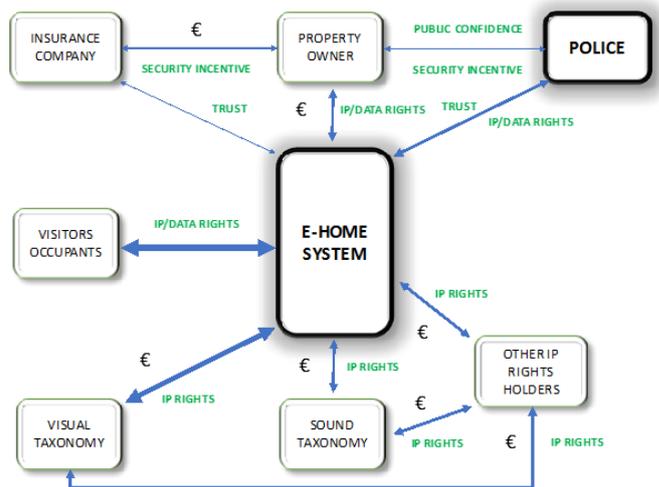


Figure 3. All values between the main actors for setting up a digitalised burglar alarm.

In terms of co-creation of value, the digitalised burglar alarm described in Figure 3 has intensified the contextual information shared between the E-Home System and the police. It is now a two-way sharing and some of the information can now be used as evidence in a court case. The visual and sound taxonomies are important but they need to be combined with other inputs. In essence, the normal sounds of a home, its occupants and visitors has become a unique fingerprint against which unwelcome intruders can be challenged.

But what Figure 3 also illustrates is the mosaic of IPR and data rights that are collectively essential to setting up this new Value Creation System. These *Mosaic Rights* are complex and multi-layered. The mosaic of (pending) patent rights interact with other mosaics of copyright, data protection, data ownership and privacy rights. The Value Creation System itself further generates new data rights during operation by constantly collecting visual and audio data from the occupants of, and visitors to, the house opening-up a host of questions as to who has access to what data and when.

If one looks at just the patenting layer of these *Mosaic Rights* from the perspective of the sound taxonomy company, one can potentially patent the arrangements of sounds, the way in which sounds are processed to create a physical effect, the communication means between the taxonomy of sounds and the E-Home System, any range of other innovative functions inside that E-Home System and, finally, the constellation of the E-Home Burglar alarm functionality itself.

In the digitalised burglar alarm system. The number of Mosaic Rights owners has increased significantly. In a traditional sensor-based burglar alarm, there was one IP rights holder i.e. the alarm manufacturer. Now there is a minimum of six and probably more. The main relationships co-creating value during the installation phase are between these *Mosaic Rights* holders, namely the E-Home System, the occupants and visitors to the property, the sound taxonomy owner, the visual taxonomy owner, the property owner and, not insignificantly, the police.

The *Mosaic Rights* of the new digitalised burglar alarm are not simply changing the relationship between the actors via cross licensing, data sharing agreements and the like – this new *Mosaic Rights* constellation changes the entire regulatory framework by introducing licensing laws (FRAND), data protection law and privacy legislation.

Mosaic Rights and the changing nature of the competition

For traditional alarms, competition is about making better devices or things. The burglar alarm business has been predictable growing in line with wealth, technology and people's perception of the intruder risk. Strategically IP is primarily used to protect i.e. to establish exclusivity through enforcement of ones' IP rights. There are only limited reasons for strategic IP cross licensing between the different actors.

But in a digitalised world, competition is about making a better alarm Value Creation System and competition is between different systems and/or different constellations and configurations of those systems. *Mosaic Rights* emerge and they are not only being used to protect, they are also being used to project. One of the legal glues that ties the different actors together and keeps them "honest" is strategic IP cross licensing between the different actors. But this

assumes that one of them owns the *Mosaic Rights* to the overall Value Creation System design as such. As illustrated in Figure 3, these rights could just as easily be owned by a third party, a system designer or one of the E-Home System competitors.

As a result, Mosaic Rights are no longer just a support offering, they have become a configuring offering that is significantly contributing to the organisation of the Value Creating System itself.

As a result, *Mosaic Rights* are no longer just a support offering, they have become a configuring offering that is significantly contributing to the organisation of the Value Creating System itself. Understanding what those *Mosaic Rights* are, how they interact, who could own them, who can use them and which regulatory framework might apply (and where) are key to making the right design choices and adopting a winning strategy.

Conclusion

The main goal of this White Paper was to illustrate how Value Creation System thinking can help different actors make sense of the complicated world of *Mosaic Rights* during the creation of novel value constellations.

New forms of innovation making sophisticated use of *Mosaic Rights* poses tremendous challenges to market actors and regulators across the world not the least of which is that Value Creating Systems are, by their very nature, dynamic and change over time.

This White Paper has set out to study *Mosaic Rights* in the specific area of IoT by looking at a digitalised burglar alarm. It demonstrates through the burglar alarm example that IPR and digital rights move sharply away from being support systems ticking away smoothly in the background towards being an integral and configuring part of the emerging Value Creation Systems themselves.

There is complexity inherent in any dynamic system and the Value Creation System approach from Ramirez and Manervik makes that dynamic visible and more understandable.

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NormannPartners
2017