C0r0n@ 2 Inspect

Review and analysis of scientific articles related to experimental techniques and methods used in vaccines against c0r0n@v|rus, evidence, damage, hypotheses, opinions and challenges.

Friday, October 1, 2021

The CORONA routing system for nanogrids

Continuing with the investigation of nanocommunication networks , whose hardware has been identified in the blood samples of vaccinated people (Andersen, M. 2021a | 2021b | 2021c), as well as the simulation software for their communication TS-OOK, it has been discovered the data packet routing system, whose name "CORONA" (**Co** ordinate and **Ro** uting System for **Na** nonetworks) should no longer be a surprise. The CORONA routing system (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015) is completed by its EECORONA energy efficiency study (Bouchedjera, IA; Aliouat, Z .; Louail, L. 2020) and the topology of the nanoregrid based on clusters or groups of emitter nannodes, which forces DCCORONA distributed routing (Bouchedjera, IA; Louail, L .; Aliouat, Z .; Harous, S. 2020).

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CORONA data packet routing

1. The work of (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015) on a coordinate system and routing for nano-networks (CORONA) is fundamental in understanding the methodology for data transmission between nanodes, which are presumably installed in the body, via c0r0n @ v | rus vaccines, after finding evidence of the presence of GQD graphene quantum dots, graphene fractal nanoantennas and graphene hydrogel nanoribbons , as well as the topology of nanocommunication networks in which they are identified and equate these elements. The routing model (CORONA) requires the configuration of some nanodes that are established in a fixed position, as an anchor, to simulate their relative geolocation, by means of trigonometry and simple measurement of their distances. This allows directing the emission of the data. In the words of the researchers "*the system can be dynamically deployed on a*

nanogrid. The nodes established as fixed anchor points, measure their distances from each other, as well as the number of jumps until their connection. In the operational phase, routing uses the appropriate subset of anchors, required by the sender of the packet, to transmit the data. This requires minimal setup and only simple calculations, based on integers, imposing limited requirements for reliable operation. Once implemented, it works efficiently, resulting in very low packet retransmission and packet loss rate, promoting power efficiency and medium multiplexity." This explanation corroborates everything discussed in the entry on wireless nanocommunication networks in the human body , since the computing capabilities of the nanodes are very limited, in many cases, not all nanodes (the GQD graphene quantum dots) have a fixed position (since they are in the system circulatory). When one of these nanodes settles on a tissue of the body, it acts as an anchor, which serves to triangulate the position of the rest of the nanodes and anchors, facilitating communication and routing of data packets. The settlement of these anchors favors the diversification of the signals, a process called multiplexing, which increases the transmission capacity, which fits with the nanogrid simulation software analyzed in a previous post .

2. In the introduction of the CORONA system, the researchers (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015) point out that the objective of their routing method is the communication of nanomachines, explicitly alluding to graphene " *Nanomachines are fully autonomous nodes that can perform simple operations and communicate over short distances. Currently, graphene-based miniature antennas are introduced (Akyildiz, IF; Jornet, JM 2010) that give nanomachines the ability to achieve high rates of transmission over very short distances when operating in the most promising operating spectrum of the terahertz band. These networks are expected to be widely deployed in a variety of fields such as biomedical, industrial, environmental and military*". This means that in 2015 there was already evidence of graphene nano-antennas for these purposes, which once again corroborates the facts and demonstrated evidence .

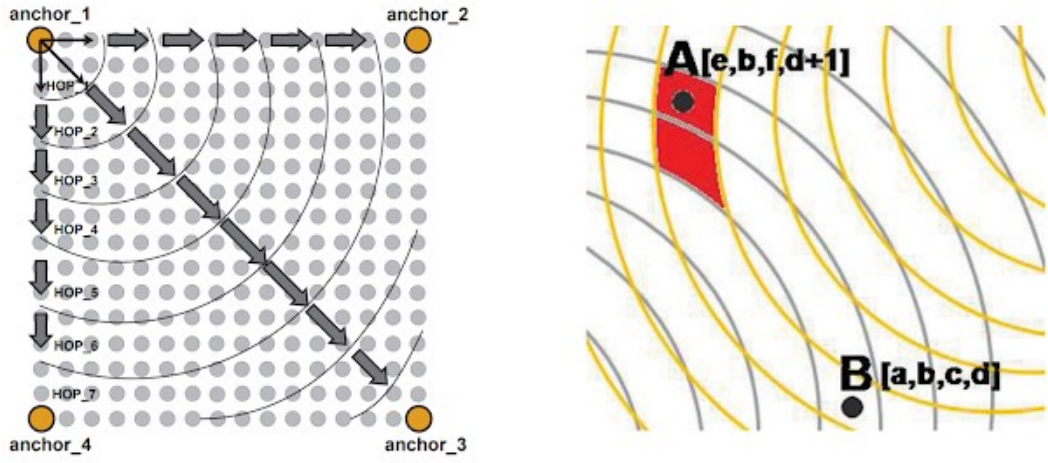

Fig. 1. The box on the left shows the fixed nanodes that act as anchors to facilitate the addressing and routing of data packets. In the box on the right, a possible limitation is shown in the routing of opposing anchors in certain areas of the nanogrid. (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015)

3. One of the challenges faced by the researchers is "*to maintain simplicity without compromising connectivity and the useful life of the nanogrid " for which they design a routing model for " software-defined metamaterials (SDMs) whose electromagnetic properties are programmable. , in order to provide addressing and routing* . " This statement is key to understanding that, in addition to the elements already discovered in the blood samples of vaccinated people, others can be found in the shape of a 2D graphene printed transistor,

preprogrammed for nanocommunication, already mentioned in the non-hierarchical network topology, according to the scheme of (Abadal, S .; Liaskos, C .; Tsioliaridou, A .; Ioannidis, S .; Pitsillides, A .; Solé-Pareta, J .; Cabellos-Aparicio, A. 2017 | Lee, SJ; Jung, C .; Choi, K .; Kim, S. 2015). This technology is critical as it " *generates stable and reliable electromagnetic properties, while laying the foundation for SDM's access authorization and security mechanisms* ." This denotes that like any other network, the development of authentication and security protocols is required to prevent intrusion and hacking.

3. However, paradoxically, one of the most important revelations of this research (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015), is not the routing system, it corresponds to the processing hardware and computing, this is the CPU. In fact it is explicitly stated in the following paragraph "*In the extremely restricted nanonetworking environment, we assume a nano-CPU capable of simple integer calculations only and, furthermore, that no information about the state of the neighborhood (neighboring nannodes) is exchanged. Basically, a reply packet is distributed using only the sender / receiver's address information in the message, preventing its transmission to the network. Addresses are made up of a set of four location attribute values, which characterize the local range of the area to which the specific node belongs. According to the proposed addressing process, each node establishes its own address locally, instead of being pre-assigned. In large nanogrids, this approach is expected to significantly reduce the painful task of targeting*.". It seems obvious that nano-grids installed in the human body have basic hardware requirements. According to the literature that had been reviewed so far, in the progress of these investigations, it was known of the existence of nano-antennas, nano -transistors, nano-transceivers, nano-sensors, swimmers, graphene nanoribbons, graphene quantum dots, nano-routers, but the explicit reference to the CPU had not been found. This is the first time it is found, linked to the nano-grids with graphene components, in the context of data routing. This is of fundamental relevance, since it suggests that to operate nano-grids, a nano-CPU is needed, which although limited, is capable of articulating / synchronizing the request packets. and response of the nanonodes in their internal communication.Therefore, it is expected the presence of nano-chips capable of acting as nano-CPU in the content of the vaccines of c0r0n @ v | rus, whose technology is (SDM).

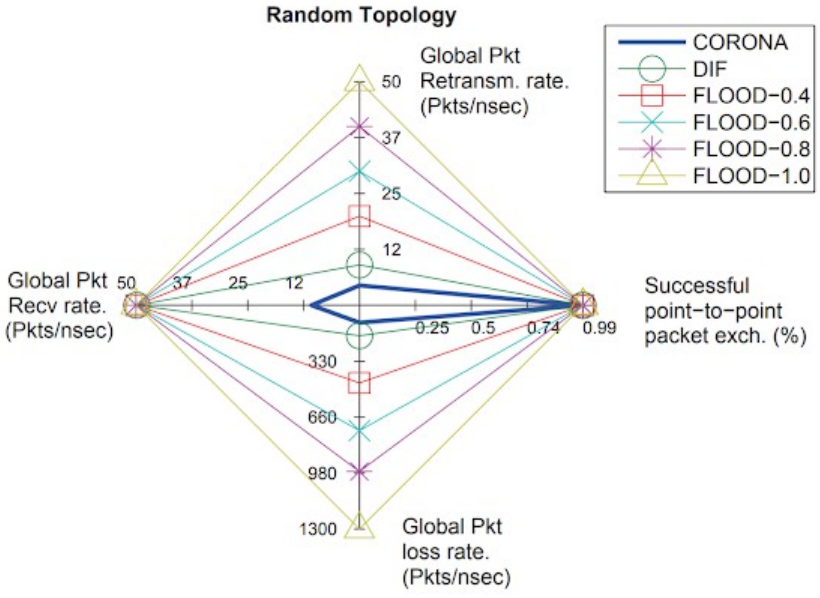

Fig. 2. The rate of data packets, successfully transmitted in the CORONA model is the highest, compared to the rest of the routing methods. (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015)

5. Abundant in the corroboration section, it should be noted that the status of the issue of the article by (Tsioliaridou, A .; Liaskos, C .; Ioannidis, S .; Pitsillides, A. 2015), confirms that its routing model is " *wireless communication based on electromagnetic waves (EM)* ", that" *electromagnetic communication in the terahertz band (0.1-10.0 THz) is the most promising approach ... for which the development of an antenna to nanoscale, which maintains its operating frequency in this operating spectrum, achieved through the use of the extraordinary new material called graphene* ", assuming that" *the communication range of a single node can be further increased with the use of the 0.1 - 0.54 THz window*.". To all this, it is also confirmed that the TS-OOK protocol is suitable for electromagnetic nanocommunication" *a MAC protocol based on handshake (handshake) is proposed, namely, PHLAME, in addition to RD TS-OOK* "which confirms once again the presence of access control protocols to the MAC medium (Jornet, JM; Pujol, JC; Pareta, JS 2012). In fact, it confirms the phenomenon of the MAC addresses of vaccinated people, located through bluetooth , on mobile phones.
6. Subsequently, the CORONA model has been completed with a multi-hop routing scheme based on a distributed cluster renamed DCCORONA (Bouchedjera, IA; Louail, L .; Aliouat, Z .; Harous, S. 2020) "*with self-addressing for dense homogeneous nanogrids. In general, all existing cluster-based routing schemes in traditional networks or nano-networks have the same main phases: i) establishment of clusters and ii) maintenance of clusters* . " This further simplifies communication, making it more efficient and faster, since packets can be transmitted to more distant anchors, avoiding intermediate steps. Specifically, it is broadcast to one of the anchors defined in the cluster.

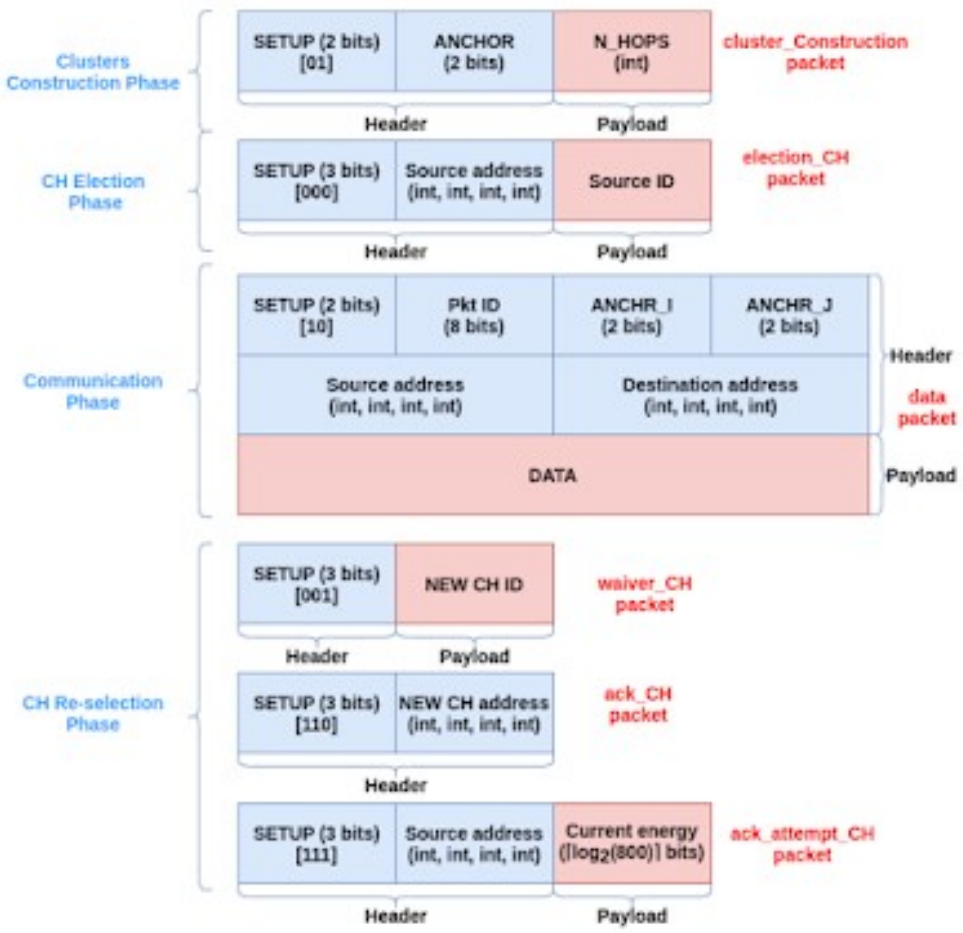

Fig. 3. Structure of the data packets in the DCCORONA model. (Bouchedjera, IA; Louail, L .; Aliouat, Z .; Harous, S. 2020)

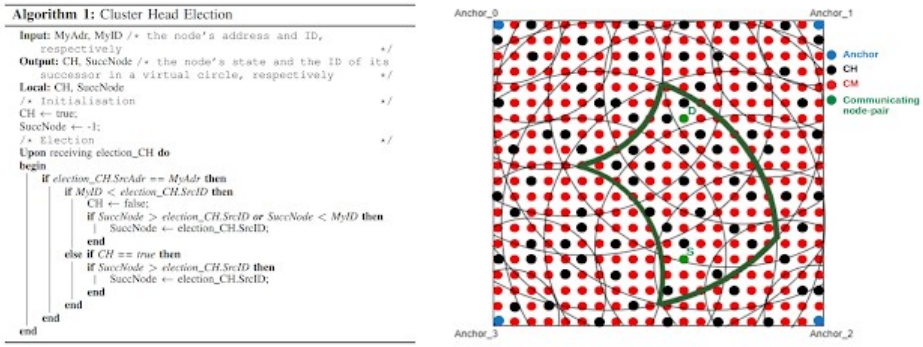

Fig. 4. The box on the left shows the cluster choice algorithm and on the right the routing process DCCORONA. (Bouchedjera, IA; Louail, L .; Aliouat, Z .; Harous, S. 2020)

A new element, the nano-CPU / nano-oscillators

The development of graphene nano-transistors is known, due to their special electromagnetic properties, analyzed in the entry on spintronics and widely documented, see (Tredicucci, A .; Vitiello, MS; Polini, M .; Pellegrini, V. 2014 | Murphy, TE; Jadidi, MM; Mittendorff, M .; Sushkov, AB; Drew, HD; Fuhrer, MS 2018). These facts, together with the new perspective offered by the articles on nano-networks, seem to indicate the existence of nano-CPU chips (SDM), based on graphene, in order to synchronize the communications of the nano-nodes of the network. One of the most characteristic features of CPUs, even at the nano scale, is the frequency of their clock, measured in Hz, which are the cycles or oscillations per second. Therefore, it could be argued that a nano-CPU would require at least one oscillator capable of setting the pattern, rhythm or synchrony of the nanoregrid, based on the frequency of its oscillation. This is what emerges when analyzing the article by (Guerriero,AND.; Polloni, L .; Bianchi, M .; Behnam, A .; Carrion, E .; Rizzi, LG; Sordan, R. 2013) on integrated graphene ring oscillators, whose speed reaches 1.28GHz operating at room temperature. Although the oscillator prototype is out of scale in the context of the nanoregrid, it does suppose a model that could have been replicated at lower scales, given its simplicity, see figure 5.

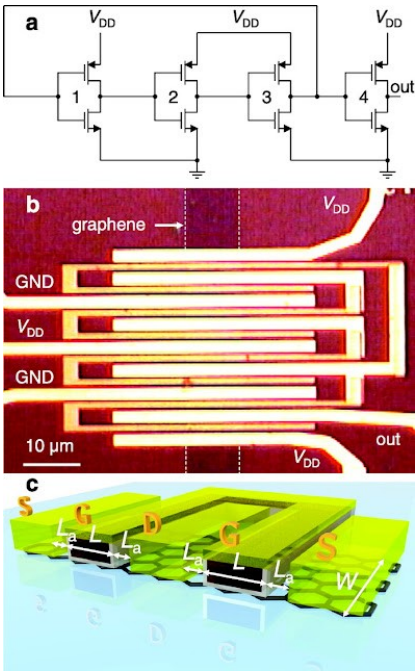

Fig. 5. Circuit diagram of RO integrated monolayer graphene ring oscillator. (Guerriero, E .; Polloni, L .; Bianchi, M .; Behnam, A .; Carrion, E .; Rizzi, LG; Sordan, R. 2013)

The miniaturization of graphene transistors and oscillators has been a constant since then, which has been evident in some singular scientific publications, such as that of (Neumaier, D .; Zirath, H. 2015) commissioned by the "Graphene Flagship Work Package" , in the editorial of the magazine " *2D Materials* " with the title " *High-frequency graphene transistors: can a beauty become a source of income?* ", in whose next goals it was cited " *in any case, it is of the utmost importance that the graphene layer is uniform under the transistor, which is typically 10 to 100 nm long and a few μm wide.”* In fact, with posterity (Xu, K .; Chen, D .; Yang, F .; Wang, Z .; Yin, L .; Wang, F .; He, J. 2017), they presented models of inferior architecture at 10 nanometers for field effect transistors made with 2D material, including graphene, applying miniaturization techniques. Another example of scaling is that of (Patel, KA; Grady, RW; Smithe, KK; Pop, E. ; Sordan, R. 2019) whose work on nano-transistors with carbon nanotubes reaches a size of 22 - 60nm. With similar measurements are the CMOS graphene-Si oscillators of (Gilardi, C .; Pedrinazzi, P .; Patel, KA; Anzi, L .; Luo, B .; Booth, TJ; Sordan, R. 2019). Most of the studies on nano-transistors and ring oscillators use graphene or carbon nanotubes (graphene) , which could give some clues as to its actual appearance,under the microscope, with a regular shape (similar to that of figure 5), or with a weft of filaments. On the other hand, the idea of the presence of nano-oscillators, nano-CPU or nano-transistors is compatible with the tuning of microwave frequencies, as can be verified in the work of (Bhoomeeswaran, H .; Sabareesan, P. 2021).

In-vivo nano-oscillators

One of the few references that address the in-vivo interaction of nano-oscillators in a biological system is the doctoral thesis of (Ramaswamy, B. 2016) relative to the administration of drugs through nanocarriers directed by electromagnetism. Chapter 5 demonstrates the ability of nano-oscillators to neurostimulate crayfish neurons through microwaves. In the author's words " *such ability to trigger nano-oscillators using bioelectric signals has potential in in-vivo biosensing applications in the brain, heart and other electrophysiological applications*." Which implies the ability to act as a pacemaker in the heart, or to serve as a treatment in neurodegenerative diseases or psychological and psychiatric disorders. Returning to the experiment of (Ramaswamy, B. 2016), a" *nano-oscillator of spin transfer torque of 0.85 GHz for an external magnetic field in the plane of 0.1 T* ". The crayfish neurons were stimulated at 5 Hz, observing neuronal currents as a response, thus verifying the cause-effect relationship. In addition , it is stated that "*By using an appropriate external magnetic field, nano-oscillators can be used to selectively rectify a specific frequency which is usually your operating frequency in that field. Such a mode of operation can be used for potential applications in wireless energy harvesting and for wireless electrical stimulation of cells such as neurons* . "

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