

# PANIO: simplification of orthodontic computing

PANIO is the name of a project. **The project's goal is to make the computer life of orthodontic providers easier.**

There's a lot of great software and hardware to do a variety of different tasks in the orthodontic practice. Yet, more often than not, these systems don't know how to talk to one another. Doctors, vendors and engineers are working together at PANIO to study how to allow these systems to communicate with each other.

We are interacting with various organizations, like the [American Dental Association \(ADA\)](#), [DICOM](#), [Health Level 7 \(HL7\)](#), [American Association of Orthodontists \(AAO\)](#), [Integrating the Healthcare Enterprise \(IHE\)](#), [Joint Cephalometrics Experts Group \(JCEG\)](#).

We are defining, correcting, documenting and implementing existing informatics standards, to make them work for the orthodontic community.

We want the existence of an approved way of communicating orthodontic data. Something that developers can use to make their software or hardware work with software and hardware of other developers.



[Blockchains Start to Creep into the Dental World](#)

[Toni Magni](#) posted on Jan 05, 2018

# DENTACOIN

Dentacoin is the first Blockchain based informatics system to make its way into the dental community. Is it actually useful?

- [blockchain](#)
- [dental](#)



[Meltdown and Spectre and Medical Data](#)

[Toni Magni](#) posted on Jan 05, 2018



Meltdown and Spectre are a codename for various vulnerabilities of basically every Intel processor, which allows a malicious attacker to gain unrestricted access to the computer's memory, so every copy/paste command, every keyboard stroke, etc. Everyone is concerned about passwords, and medical data might be even worse!



[HL7 Orthodontic attachments document](#)

[Carla Evans](#) posted on Dec 15, 2017



[Blockchain as Our Future](#)

[Toni Magni](#) posted on May 08, 2017



In case you still have not understood how much of a game changing technology blockchains can be, this article from the World Government Summit gives a pretty good picture.

## why is this article cool?

It's super cool, because humanity now has a way to solve the big messy global transition from paper to electronics in an interoperable, functional and scalable way! And this article will give you example of exactly how this can become true and how game changing it will be from a technical, medical and governmental perspective.

- [blockchain](#)



### [Who Owns a Patient's Clinical Data?](#)

[Toni Magni](#) posted on Nov 14, 2016

I've personally struggled with this concept for a long time. When i thought about it, the options i would come up seemed to be only 3:

1. Vendors: those who develop the systems that providers use to collect and store clinical data retrieved from patients.
2. Providers: the doctors who provide medical care also by collecting and storing patient's data in systems developed by the vendors.
3. Patients.



### [ONC and how to measure "widespread interoperability"](#)

[Carla Evans](#) posted on May 02, 2016



The Office of the National Coordinator for Health Information Technology (ONC) has published a [Request for Information \(RFI\)](#) aimed at establishing the correct metrics to use when trying to assess whether the goal of widespread interoperability of electronic health care records has been met.

## why is this cool?

It's exciting, because this means the government is serious about actual real interoperability: they want to define a way to measure how well medical software can communicate with each other.



[AAO is now hosting this wiki. Thank you AAO.](#)

[Toni Magni](#) posted on Apr 11, 2016



American  
Association of  
Orthodontists®

My Life. My Smile. My Orthodontist.®

It's official: the [AAO](#) is now sponsoring the PANIO effort

- [aao](#)
- [contributions](#)



[HPD: the Healthcare Provider Directory](#)

[Toni Magni](#) posted on Dec 30, 2015

The goal is to have a standard for this directory, such that every group, individual, organization or institution who is maintaining one, could have the ability to share it, and make a more comprehensive and up to date version available.

- [ihe](#)



[Dr. John Grubb steps down](#)

[Toni Magni](#) posted on Nov 05, 2015

Dr. John Grubb has been of great help and an invaluable resource. He has most recently followed up to make work item ACT-6 A Digital Standard for Sharing Orthodontic Viewsets progress steadily. We really hope he will still find time to volunteer work with us. His feedback is greatly appreciated and he will always be welcome to join us, physically or remotely. Thanks John!...



[Nuove regole legali per il gestionale di uno studio ortodontico](#)

[Toni Magni](#) posted on Oct 15, 2015

Nuove regole prevedono che ci sia un ulteriore consenso al trattamento dei dati che tratti specificamente il gestionale elettronico; il paziente abbia la possibilità di non accettare che i propri dati vengano inseriti in un gestionale lo studio informi al "Garante" Il "Garante" per la protezione dei dati personali è un organo collegiale, composto da quattro membri eletti dal Parlamento, i quali rimangono in carica per un mandato di sette anni non rinnovabile....



[Great chapter on 3D orthodontics published](#)

[Toni Magni](#) posted on Sep 03, 2015

The open book Issues in Contemporary Orthodontics <http://www.intechopen.com/books/editor/issues-in-contemporary-orthodontics> gets published today and with it, chapter 9, which covers 3D surface scanning for intra and extra oral images (3D impressions and 3D photographs) as well as 3D printing technology and how it could affect the orthodontic practice. The chapter is called 3D Scanning, Imaging, and Printing in Orthodontics, has been written by Emilia Taneva, Budi Kusnoto and Carla A....

- [3d](#)
- [ioscanning](#)
- [3dprinters](#)
- [orthodontics](#)



[Going paperless: On what resolution to use for document scanning](#)

[Toni Magni](#) posted on Aug 31, 2015

Overview When orthodontic practices go paperless, the question of resolution arises: what is the best resolution to scan documents? Rumors say that 300 DPI is the level that is suggested on-line for preservation of materials which will be destroyed but need to be maintained from a legal perspective. However, this resolution produces large amounts of data and can eat up drive space quickly....

- [paperless](#)
- [ocr](#)
- [cephalograms](#)



#### [Medically Necessary Orthodontic Care: AAO's efforts to establish consistency](#)

[Toni Magni](#) posted on Aug 15, 2015

On August 15th the AAO Bulletin <https://www.aaoinfo.org/news-publications/publications/bulletin> published an article discussing the importance of establishing what medically necessary orthodontic care actually means. This has become crucial, ever since the Affordable Care Act (ACA) introduced benefits for orthodontics as part of the embedded pediatric (dental) medical policies... only available to those patients whose cases are considered to be "medically necessary". See article below.

- [aao](#)



#### [DICOMweb Hands-on Workshop](#)

[Toni Magni](#) posted on May 29, 2015

DICOM will hold the DICOMweb™ Hands-on Workshop, scheduled September 10-11, 2015, in Philadelphia PA. This could be a very cool workshop.

- [dicom](#)



#### [American Board of Orthodontists to approve IDs for DICOM Structured Displays](#)

[Toni Magni](#) posted on May 27, 2015

The ABO (American Board of Orthodontists) already defined a standard layout for their board exams. But that was just one layout. We are defining 3 layouts (which will serve as examples for the documentation), and are asking the ABO if we can call them ABO-01, ABO-02 and ABO-03.

- [abo](#)
- [dicom](#)