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# The Problem Braiins Solves

Financial Reporting is a key part of the Accountability of all Organisations to all of their stakeholders.

As Prince Charles said in an [address to the International Forum of Independent Audit Regulators 2012](http://www.accountingforsustainability.org/hrh-the-prince-of-wales-address-to-international-forum-of-independent-audit-regulators-2012) "It is accountants [and Financial Reporting] who are going to save the world". A transcript of Prince Charles’ address is included as Appendix 2.

Yet Accountants are struggling to meet this lofty goal, in part because their tools have not been up to the task.

As Jacob Nielsen (Usability guru of the Nielsen Norman group) said in his newsletter of 8 July 2013 when commenting on the death of Dr. Douglas C. Engelbart, the inventor of the mouse “But Engelbart’s deeper goals have yet to be realized, since most computers end up wasting our time as opposed to truly allowing us to have better insights.”

That is especially true of most financial reporting despite the plethora of standards and regulations.

## The Challenges facing Accountants and Businesses

A number of major environmental, legislative and technical changes are coming about in quick succession resulting in the biggest upheaval to the process methodology and content of financial reporting EVER.

### The Environment

The world at large expects more of organisations in the 21st Century. The address by Prince Charles presents the expectations eloquently, and clearly defines the role that accountants and financial reporting can play for the betterment of all, if they deliver.

### The Legislative Reporting Framework

* Creation and adoption of international standards (International Financial Reporting Standards or IFRSs) which are fundamentally different in approach or philosophy from previous GAAP (Generally Accepted Accounting Principles) based standards, causing major changes in regulatory reporting world-wide and in the UK in particular.
* Despite the success of the IASB (International Accounting Standards Board), the body responsible for the IFRSs, in creating and gaining international acceptance for IFRS, universality has not been achieved, and is not likely to be achieved in the foreseeable future. US GAAP isn’t going away any time soon. Even in the UK, where the IASB is based, we are faced with UK IFRS i.e. a UK specific version of IFRS.  
    
  So accountants and financial reporting will continue to need to cope with multiple standards, which can even involve different philosophies for determining what is “true and fair” e.g. IFRS vs GAAP.
* Increasing requirement to report for multiple jurisdictions and multiple standards like those mentioned above e.g. US GAAP and IFRS and or UK IFRS  
    
  The differences between standards can in the worst case involve the production of completely separates sets of accounts from the raw data onwards, which is an obvious cost (waste) and potential source of error and confusion.
* Requirement to produce all reports in computer readable form – (i)XBRL

### The Business Environment

* Global impact – more and more businesses operating across multiple countries
* Interconnected supply chains and outsourcing
* Real time reporting and the increasing stakeholder readership.
* Decentralised structures and increasing homeworkers, virtual workers, outsourced work
* Ever more sophisticated internal reporting systems; simple ledgers giving way to complex ERP systems.
* Increasing competition – from other companies, technologies, industries and countries. Now, even your published accounts form part of your competitive armoury.

### The Technologies

* Cloud computing (also known as SaaS - Software as a Service)
* Mobile always on computing with more people wanting, and companies allowing or even encouraging BYOD (Bring Your Own Device)
* Web 2.0 going to Web 3.0 or the Semantic Web
* Business Intelligence (BI) systems
* XBRL was a laudable 1998 fresh start attempt to cope with some of the issues mentioned above, and with a lot of effort and commitment by many has been adopted around the world in consequence. As a result of learning and all the other changes in progress, XBRL has also been evolving “on the job” which, while good, has imposed its own set of keeping up issues. Tuples came and went, the calculation linkbase is being replaced by the formula linkbase before many have even caught up with the calculation linkbase; the table linkbase has arrived recently, and so on. How many accountants even know what a linkbase is anyway?
* Big Data which is one of the current buzzwords, even if you are not the NSA. Much BigData work has been for marketing purposes, mining social website posts for example, but it also is being used in BI applications e.g. SAP’s HANA. Financial Reports when properly available in truly comparable semantic form will be a most useful applicable of BigData techniques.

### The Failure of Financial Reporting Systems to Keep Up

By and large Financial Reporting Systems have not kept up with the changes and needs very well. The complexities and constant changes have led to evolutionary change that has mostly involved tacking more on to what was there before, albeit with a prettier face.

Whereas an entity's general ledgers are controlled double entry environments, the financial statement reporting complexities mean that many entities, especially larger ones, use a multitude of Excel spreadsheets and Word documents that are pulled together to produce the financial statements. This has led to numerous errors, some quite serious, resulting in major and embarrassing restatements.

Such approaches, using tacked on afterthoughts and accounts hand crafted via Word and Excel, are past their use by date. With only such limited tools in their tool-box accountants and financial reporting will continue to fall short of what the modern world needs and expects.

## The Braiins Solution

Braiins aims to cope with all these issues, taking advantage of the new and starting from a fresh start, thereby providing accountants with the tool to allow them to save the world in line with the vision of Prince Charles by releasing the data and the insights.

The following sections describe how Braiins delivers on this promise.

# Braiins Overview

Braiins has been designed from the start as a Financial Reporting (FR) system to solve the problems and challenges described above. It is a wholly new, “fresh look” that puts the new IT landscape to effective use, while avoiding the deficiencies and complexities that evolved systems and attempts impose.

Braiins returns financial reporting to the accountant and business person in their language, while retaining and building on all the benefits that the evolving standards (such as XBRL) and systems have aimed to provide.

Braiins transforms the process of financing reporting and opens up exciting possibilities but by maintaining external compatibility does not force or insist upon the junking of current systems.

## Braiins Objectives

The Objectives of Braiins are:

* Provide a zero capital cost, high value, pay as you go, fast, easy to use and understand financial reporting system for use by accountants and business people, accessible to any (authorised) user, anywhere, anytime, on any internet capable device, for any entity, with continuous development without any upgrade hassles, by embracing and enabling cloud computing in business and accounting financial reporting language.
* No lock in either financially (no contract) or for data – data being fully exportable and deleteable

Simplify all parts of the process from guided fool-proof data entry, to intuitive report customisation, so that:

* it is not necessary to become an expert in computers, XBRL, Taxonomies, Excel/Word integration to produce, analyse, and use financial reports
* study of complicated and difficult books such as “XBRL for Dummies” is not needed to understand and use any part of the system
* all that is required is understanding of financial reporting (accounting and standards where applicable) and use of an internet browser
* Eliminate duplicated data, effort and potential errors so that companies or groups operating in multiple countries/jurisdictions can re-use common data to generate accounts for each different set of statements/reporting standards/taxonomies.
* Reduce errors from lack of control over a mishmash of data from various sources.
* Handle all sizes, types and structures of entity.
* Eliminate all range restrictions e.g. on number of subsidiaries or directors.
* Report over multiple jurisdictions, even within one Entity or Group.
* Exchange data with other cloud based systems.
* Make all information and reports semantic web ready.
* Handle changing standards, additional disclosure requirements, including data upgrades, seamlessly, with no effort by users other than getting up to date with the new rules.
* Handle Restatements (Prior Period Adjustments) properly with all directly and indirectly affected values able to be shown in a different style.
* Provide for quarterly accounts as needed for stock exchange reporting by public companies, and annual accounts for regulatory and annual report purposes. (As per “What Braiins is Not” below, monthly reporting is not covered.)
* Keep data indefinitely – until specifically deleted.
* Automate the entire process from Record to Report.
* Operate with speed and style, from input to final reports.
* Meet regulatory XBRL or iXBRL reporting requirements, initially in the UK for FRS 102, then for other standards and countries.
* Improve continuously, with no upgrading by users involved, and next to no downtime.
* Build and put to use in Braiins a financial information engine called the Standardised Information Model (SIM) for categorising (describing) and storing financial data that handles much of the processing, accounting relationships, error checking, control (what is sensible/allowable, who can do what, and who did what when), and complexity management, “behind the scenes” without intruding on actual use.

Build and put to use in Braiins a Semantic Financial Reporting (SFR) front end to SIM which

* includes a Report Generator that is easy to understand, use and maintain
* provides smart searching and analysis the ‘release the insights’

The totality of Braiins (SFR + SIM)

* Ensures complete integrity and transparency of all data.
* Simplifies and facilitate financial reporting, analysis, exchange, and comparison for all sizes, types and structures of entity – from the simplest to the most complex.
* Provides the Solution to the Problems that cause Accountants and Financial Reporting to struggle to meet the “Save the World” goals.

## What Braiins is Not

Braiins is not a general accounting system i.e. it is not intended for sales ledger, stock ledger, VAT/GST, payroll etc. processing. Rather it works with such systems to specialise in the Financial Reporting “end product” or Final Accounts as they are called in the UK.

## Braiins and XBRL

Braiins is not a direct replacement for or alternative to XBRL. Braiins works with XBRL. Charles Hoffman, the “father” of XBRL, and the hundreds or thousands of people around the world who have worked on XBRL Taxonomies and on fostering the adoption of XBRL have done sterling work. XBRL is well on its way towards ubiquity as a result of their good efforts.

Whilst we see that XBRL has contributed a lot, and will continue to do so, in our view it should be more of a behind the scenes technology, like databases say, which an accountant or business person should not need to know about in detail if his FR system is up to the task. XBRL can become very complicated. In our view the expectation of recent years that all accountants should become XBRL literate is unnecessary and misguided. In our opinion the FR should do all the XBRL work for a business person or an accountant in business or practice.

Thus Braiins presents everything in accounting and business speak with nary a mention of XBRL, doing everything in the background to automatically handle the XBRL work. If we have been able to achieve this, it is because we have been able to see further thanks to standing on the shoulders of giants, to quote Isaac Newton. We acknowledge the debt that Braiins and its concepts owe to XBRL.

If in time any of the Braiins internals which work the magic of working with XBRL while hiding it completely should be seen to be useful more generally than just within Braiins itself, then we would open source them for adoption and use by anyone at no charge. At all times we remain open to working with XBRL.org, regulatory bodies, and standards bodies, in addition to our customers to see Braiins and Financial Reporting continue to advance.

## Key Concepts of Braiins

The objectives of Braiins described above are very demanding, so how does Braiins achieve them?

Conventional Financial Reporting (FR) programs take the various components – data import, GL codes, tables and schedules, report generator and latterly (i)XBRL output - and bolt them all together like a toolbox for a user to assemble each entity’s financial reports on your in-house computers, or increasingly, via cloud services.

But we asked ourselves this question? In this changed reporting and IT environment, if you were to design a brand new Financial Reporting program would it be constructed like any of the existing programs? We concluded “No”. So Braiins starts with a clean design and a fresh perspective.

In the nearly 40 years since FR programs started to appear (HAPAS, HArtley Professional Accounting System launched in 1975 being one of the first), the accounting and IT worlds have changed dramatically. It is time that FR program concepts did also.

FR program developers face the question of how to organise the data, which typically involves a Chart of Accounts (CoA) in some shape or form. Three very different ways are:

* Try to make the Chart(s) so comprehensive that they have a code or multi-level subcode for every possible piece of accounting and disclosure information, both double entry, and schedule in nature, which could ever be required. This can mean having multiple Charts according to target taxonomy, jurisdiction, and entity type, with each running to many thousands of Codes. This become a nightmare for all concerned, especially if additional disclosure requirements come along which don’t fit the coding structure plan, as has happened all too often.  
    
  One attempt at developing a new chart targeting IFRS contains 35,000 accounts, but even that monster just scratches the surface, as the theoretical number of variations via the IFRS XBRL Taxonomy runs into the hundreds of millions.
* Dispense with an internal CoA in the FR and link information directly from the Entity’s own GL CoA, then add schedules produced in Excel and/or Word.  
    
  This approach has its niceties, and demonstrates well so is beloved by Marketing, but it also has problems due to entity GL variations, and the complete lack of any structure for the schedule information, meaning that much control, logic and accounting integrity is thrown away with the internal CoA.
* The advent of XBRL Taxonomies was initially seen by some as the way out of the mire, by using the XBRL concept codes (names) directly as the CoA codes, which would then make the generation of XBRL financial statements easy.  
    
  Unfortunately, things didn’t quite work out as hoped, as XBRL is designed to describe the result (the financial statements), not the input data. Often there is no direct one to one match between an entity’s GL and the XBRL Taxonomy. XBRL Taxonomies do not use double entry concepts or control accounts. Thus, attempting to transfer data into an XBRL code based FR from an entity’s GL would require some operations similar to the manual XBRL tagging that people have to resort to when converting Word or other non-XBRL accounts to XBRL. Not very good!  
    
  Charles Hoffman has wondered why accounting software does not use XBRL directly. This would seem to be why. As far as we know, the apparently tempting option of a pure XBRL “chart” is not used by any real world FR.

FRs that have evolved from last century’s simple 3 then 5 digit code charts have tended to go the first way, with ever more complicated and messy charts.

The trend in the market for newer systems seems to be towards the second more flexible “marketing driven” option, as the first all encompassing chart is perceived as being too messy, too difficult, and not “user friendly”.

The Braiins fresh start has allowed us to take a different, and we believe, smarter approach.

The SIM equivalent of a CoA maintains all the accounting details and integrity in a tree structure of only about a thousand codes, which have names to make then easy remember or search for. The names are similar to XBRL names but tend to be shorter, far fewer in number, and intended for standardised cross taxonomy/jurisdiction/entity type use.

Technically they are financial data sets complete with sophisticated logic; which is why their power, flexibility and compactness transcend any conventional sets of Charts of Accounts.

In addition to its home code in the tree, any item of financial or other information can be described by tagging it with as many tags as is needed to fully describe that piece of information, using tags permitted for that tree code, and that type of data. The concept is similar to the tagging of blog post and other web pages so that web search engines can find and organise the information. SIM does the same for the data in Braiins, but in a controlled way, so that many possible errors are eliminated right at the start.

An example should make it clear.

BS.Assets.PPE could be the code for Property Plant and Equipment assets. (Tangible Fixed Assets in older terminology.) That’s it. One code covers all PPE assets. [Charles: This might need to be adjusted if we do decide to stick with separate Bros for Acquisitions, Disposals etc.]

A particular asset class could be tagged as ‘Land and Buildings’, and a transaction affecting it tagged as an Acquisition or a Disposal, or Depreciation or Impairment etc. SIM knows how these relate to one another and which combinations are valid. SIM automatically performs Start/End (Opening/Closing) calculations using movement postings. SIM automatically sums the PPE assets by class (tag group), and for all PPE assets. A TB can show full details, intermediate sums, or just the total sums e.g. the all PPE Assets. Similarly an SFR report (and report writer) does not need to be concerned about summing PPE assets or groups them. That all falls out via the tag groups used.

SIM would prevent a PPE entry being tagged as something silly for a PPE Asset like ‘Special Purpose Entity’. (XBRL tagging systems cannot prevent all such silly postings due to the broader ways in which XBRL Taxonomies are defined, so ‘valid’ XBRL can sometimes be accounting nonsense. SIM keeps the lid on that can of worms.)

So, the key concepts of Braiins come down to:

1. Cloud based to provide accessibility, interconnect ability, reliability and pay as you go cash flow flexibility, continuous development, with no lock in.
2. Highest overall quality from a company focussed on Financial Reporting alone, driven by people with passion.
3. Dedicated financial accounting engine. Key to the program’s power is a conceptual redesign of all the major components. They have been amalgamated seamlessly in to a financial accounting engine that incorporates levels of automation, integration and intelligence beyond anything achievable in any conventional FR program. This simplifies the accounting and regulatory reporting, whilst ensuring accounting integrity, all supported with complete, fully detailed data trails.
4. Principle of fully explicit relationships – if one piece of information is related to other pieces of information then their full relationship to each other is declared and controlled within the program.
5. Making XBRL output for regulatory or other requirements easy without any knowledge of XBRL details, or need to descend to things like XBRL manual tagging.
6. Creating, storing and organising all data in a standardised form for cross entity/jurisdiction compatibility via SIM or Standardised Information Model with access to that data via SFR (Semantic Financial Reporting). The SFR-SIM combination is potentially a unified regulatory financial semantic notation system – a sort of “super XBRL”.

The first five points above could be seen as desirable features of any modern, advanced Financial Reporting program, with the difference that Braiins can really deliver them thanks to the complete re-think of the whole process, and point 6.

The 6th point, the “iceberg beneath the water”, SFR-SIM, is one of the truly revolutionary aspects of Braiins. It has the long term aim of being an international open source standard to revolutionise accounting across the globe – for the benefit and use of all Entities, Agencies and Accountants. In the shorter term, it forms an underlying data structure used within Braiins FR.

The development and use of SFR-SIM enables Braiins to access financial information from virtually any computerised accounting system, and output across multiple regulatory jurisdictions (even within one Entity or Group).

## How Braiins operates

Braiins works from general ledger data onwards to produce statutory financial statements and business reports.

Links to general accounting systems (Cloud or In-House) will provide the bulk of the required data. Because most data will be imported, the input/edit system is optimised for ease of use, and intelligent prompting, rather than for basic repetitive data entry key punching speed.

It can work from the simple TB of a micro business, the detailed GL of an SME or even manage massive amounts of data for a group e.g. for hundreds of subsidiaries/associates/join ventures. (No matter how big the volume of data stored, it remains fast and responsive. In fact everything about Braiins is fast.)

# In greater detail

Over the last few decades accounting standards have become ever more complicated, and despite the best efforts of the IASB with IFRS, there are still many international/jurisdictional variations in effect, and this is likely to remain the case.

Whereas an entity's general ledgers are controlled double entry environments, the financial statement reporting complexities mean that many entities, especially larger ones, use a multitude of Excel spreadsheets and Word documents that are pulled together to produce the financial statements. This has led to numerous errors, some quite serious. This complicated area is often referred to as Record to Report.

Braiins brings that whole situation back under control, without inhibiting flexibility, or making things complicated. In fact, it actually makes it all easier.

Taxonomies can provide a measure of checking when the accounts are output in XBRL form via the Calculation and Formula linkbases, but not all Taxonomies make use of these facilities. The UK ones do not, for example. The UK regulatory authorities, and others, make the assumption that the systems used to generate the accounts provide accounting integrity. That was once the case back in the last quarter of the 20th Century, but is no longer necessarily true. In bolting on XBRL to older systems designed for the pre XBRL world, and the demand from marketing departments to allow editing on the face of the accounts, plus the widespread use of spread sheets and Word "accounts generation", mean data integrity and control has been lost. In most cases, complete nonsense can be entered, and even be verified as valid XBRL by XBRL gateways.

So, in some respects, despite all the advances in computer power and sophistication, and the advent of machine readable XBRL, accounting and business reporting has gone backwards.

Braiins reverses that negative trend, taking a giant leap forwards, but in a non-intimidating way. In fact Braiins is deceptively simple and easy. Accountants and business people can understand it without having to study a difficult 400 page book like "XBRL for Dummies" or wade through a 65 slide PowerPoint slide show on "How to Use Dimensions". Everything just works in a natural way, with clear choices at every step. Aspects of the standards/taxonomies that do not apply to a particular entity e.g. Financial Instruments do not get in the way if the entity does not use them.

A big part of the magic by which Braiins reinvents accounting and business reporting is BRL, Braiins Report Language.

## SFR-SIM: Semantic Financial Reporting – Standardised Information Model.

To explain why SFR-SIM, a bit of a diversion is necessary.

XBRL adoption is widespread throughout the world, and is well on its way to becoming ubiquitous. So Braiins must and does speak XBRL.

The aims of XBRL are laudable: machine readable accounting/business data that is standardised and comparable across entities. (No XBRL system yet provides for cross jurisdictional comparisons.)

The originators of XBRL and all those who have much put much effort into it over the years are to be congratulated on their success.

However, in practice XBRL has become complicated and intimidating. In part this is the "arrow in the back" consequences of XBRL evolving on the fly e.g. tuples came and went, the calculation linkbase is being replaced by the formula linkbase before many have even caught up with the calculation linkbase; the table linkbase has arrived recently, and so on. Do many people even know what the hell a linkbase is anyway?

Any computer system tries to hide the XBRL details, but with varying degrees of success. At least one system even offers editing on the face accounts for both accounting/layout and XBRL. How awful is that? Many or most systems end up with some need for manual XBRL tagging.

The common use of the X (eXtensible) feature of XBRL to add entity specific tags, especially in the US re US GAAP, has reduced the utility of the XBRL data.

It appears to us that too much of the XBRL complexity intrudes on the accounting. The ideal is that the computer system should handle the complexity - all of it - while keeping the human part clear, understandable, and usable without special study/knowledge beyond accounting and the relevant accounting standards or company law.

### Standardisation, Calculation and Meaning (Semantics)

To summarise, the problems that are arising with XBRL are in the areas of:

**Standardisation**

The various Taxonomies have become like different dialects or even languages.

What started barely 10 years ago with the intent of providing a universal business/financial language is now has become diverse and fragmented. This is compounded by the difficulty in translating between the taxonomies

**Calculation**

Despite XBRL be able to handle calculations and information relationships, many taxonomies have not used this facility, including all the UK ones. This is like gazing at a building which has no structural plans. You have no idea of how it was built, or whether it might fall down at any time.

**Meaning (Semantics)**

This aspect should be crystal clear and unambiguous. But the loose use of the eXtensible part of XBRL means information can be created to which no-one, other than possibly the creator, has any idea of what it means.

It is not reasonable to expect the poor old accountants of this world to get embroiled with sorting out this mess for each of their entities. You want a well laid out end-to-end motorway, not a road that keeps turning into a muddy track, and has junctions with no direction signs.

### Hence the need for FR-SIM

This is where BRL comes in. BRL is a clean 2013 start that builds on the experience of XBRL and the advent of powerful cloud based networks, to hide all the details while retaining the power, and in fact going well beyond what XBRL itself currently offers. The output from Braiins is compliant XBRL as required for regulatory purposes, and Braiins spits that out very quickly e.g. a 40 page set of accounts in a quarter of a second, but the workings are all in BRL.

### Smart Objects – Lean and meaningful (No redundancy, no duplication)

BRL uses a short (xxxx elements) universal chart of accounts (not taxonomy concrete elements) that makes sense to any accountant. The "accounts" themselves are actually smart objects called BROs or Braiins Report Objects which embody within themselves the knowledge of what sort of data they can hold, what sums (additions) should be automatically performed with the data, and how to convert that data to XBRL output. (One BRO can hold lots of data.) BROs at the base or core of Braiins prevent many errors ever getting started. Higher level checks are performed using a version of the Braiins report generator, as a kind of super formula linkbase, but one which can be easily extended and augmented for various entity types and taxonomies/jurisdictions.

A particular value (number or text) has a BRO or "account" home plus any number of properties (including none) to describe it and to allow analysis in reports e.g. UK, USA etc. for a Sales figure, LandAndBuildings, Owned, UK for a Tangible Fixed Asset addition etc.

Properties are a bit like XBRL dimensions, but both broader and simpler. Properties are grouped into Folios, a bit like XBRL hypercubes. (Different names have been used deliberately to avoid confusion.)

Properties describe a value to any desired degree of detail. BRL includes dynamic properties e.g. Officer.BondJ, Sales,Asia,HK,Entity.WongAndCo. In this way the short and simple "chart of accounts" can handle any degree of detail or complexity. People, Entity, Address, and Contact details are held in the database just once but can be referenced as properties, with any edits to the DB values flowing through to wherever that property is used. The property system is flexible and open ended e.g. no 40 Directors limit as in UK-GAAP and UK-IFRS , with two forms of dynamic property replacing XBRL tuples or typed dimensions and the X for extensibility of XBRL. There is no need to start trying to think in terms of n dimensional hypercubes (huh?) as with XBRL. Just attach whatever properties are needed or desired to describe a particular value (within controlled limits as per the BRO's knowledge), and Braiins/BRL sorts it all out.

The combination of Posting Types and Dynamic Properties make it possible to handle information relating to different

Regulatory jurisdictions

Industries

Entity Legal status

Information type

without having to duplicate common data or structures.

If you have no idea of just how complex this can get, we hope that for your peace of mind that it stays that way. The people behind Braiins have been there with previous (successful) financial reporting programs. The Charts and Formats quickly grow exponentially compared to the program itself, and consequently consume ever increasing resources, both from the supplying software house and the end user if they have done any customisation.

So wherever possible the data sets are universal, but where required, sets or elements are specific to particular jurisdictions, industries, information types, entity types etc.

These concepts are not incompatible with XBRL, let alone competing. On the contrary, they are derived from concepts used in XBRL taxonomies. We have just refined and extended them, and applied then back to the very core of the program, rather than leave them as extended add-ins as is done by conventional accounts production programs. In short, we have taken XBRL to its financial reporting logical conclusion.

## Report Generator – powerful, simple and intuitive

Braiins includes a general report generator, which can produce any desired report as html or a pdf. The report generator is powerful yet easier to use than others because it works with BROs that already have performed many of the required summations, and which know where they can or should not be used, because of their inbuilt knowledge e.g. a Revenue BRO could not be wrongly used in a Balance Sheet report. It is also fast, very fast.

Restated figures are kept track of so that every value in the comparatives of a set of accounts that is affected by restatements can be shown in a different style for example.

Schedule tables for notes fall out easily.

Graphs and images can be embedded.

## Progression

RAP [to be expanded] for use by UK Agents (Accounting Practices), English only

Companies including groups

Other jurisdictions

Comparative database for participating entities

Languages other than English

BRMS

ResearchGate type network i.e. comparative database on a big and international scale

General Business Report System for companies as a web service tying in with the above

Pure SFR-SIM reports as an optional alternative to XBRL

## Technical

For those interested .... cloud using servers NOT in the USA, MySQL and/or Hadoop clusters, HTML5, local storage, compiled PHP, report generator compiles PHP code which is itself compiled = power and speed, OOP (Object Oriented Programming) built in to the heart of Braiins via BROs, .....

All data belongs to the entity and can be retrieved or deleted totally.

## End Result

All the computer, XBRL, and semantic web complexity handled transparently by Braiins

Control returned to the Accountant in a way that allows him/her to concentrate of just the accounting, without worry about creating messes

True inter-entity comparability

Cross taxonomy/jurisdiction accounts from one set of raw data

Semantic web integration = full reporting of the whole impact of a business, environmental as well as financial

Full business reporting service and inter entity/country comparisons to any level of detail and sophistication for public company information, and for any other entities which choose to participate with privacy preserved

Clearer, better, less error prone accounting and reporting for all

= Accounting and Business Reporting as it can and should be in the 21st century given the computing power now available to all thanks to the cloud.

# Braiins - Design Parameters

### The parameters are set by those required for Regulatory Accounting.

1. Year; open ended (for multi-year/entity comparison – possibly a useful spin-off revenue stream
2. Periods per year – 4 to cope with quarterly external reporting to SEC and LSE etc.
3. Data detail - GL level plus additional financial disclosure information
4. Optional Related data - ancillary information e.g. accounting information specific to corporation/income tax

Re point 4, this would be stored records such as Fixed Assets and their Capital Allowances.

As discussed this could be handled though posting types rather than taxonomy variations. It might also be something that could be handled through Property Items e.g.

Income Tax Status

- Allowable (default)

- Disallowable

Obviously what types of data is allowable or disallowable will vary from country to country, but is not related per se to a Regulatory Accounting Taxonomy.

# HRH The Prince of Wales Address to International Forum of Independent Audit Regulators 2012

Video link, caption, and transcript to be entered here.

# Original email Braiins and BRL 10 June 2013

Here are some initial thoughts for working up into a proper statement of what Braiins and BRL are about.

For you to comment, edit, add to, and for us to discuss in the Skype call.

2011 Definition

Braiins is an iXBRL accounts expert system which generates Taxonomy and HMRC/CH compliant accounts while ensuring accounting and dimensional integrity is maintained, all under full practice control, with complete audit trail.

Comment from You

[6/7/2013 6:24:17 PM | Edited 6:24:50 PM] Charles Woodgate: Re comments in your email of chat with Tony and Types Dimensions. Yes agree a statement of what Braiins and BRL are about would highlight to one and all (including us of course) why what we are dong is so revolutionary and important. Need some title to hang it from, may be something like "Getting the Better of XBRL".

Braiins

Braiins is a cloud based accounting system which transforms the financial statement and business reporting processes for small, medium, and large entities.

Braiins hides the accounting, regulatory, and computing complexities while ensuring accounting integrity.

Braiins restores control to the accountant who does need to become an expert in computers, XBRL, Taxonomies, spreadsheets/Word integration etc.

Braiins is wholly new, designed from the start to be able to work with different accounting standards and taxonomies, in different jurisdictions. (The first release is for UK FRS102 but support for additional standards will be added progressively.)

Most importantly for companies or groups operating in multiple countries, the same raw data can be used to generate accounts for different standards/taxonomies.

The data held by Braiins, and the reports generated by Braiins, are semantic web ready. [See .... re semantic web and its significance.]

Braiins is not a general cloud accounting system i.e. it is not intended for sales ledger, stock ledger, VAT/GST, payroll etc processing. It works from general ledger data onwards to produce statutory financial statements and business reports. Links to general cloud accounting systems will provide data. Braiins can work for an SME or manage massive amounts of data for a group e.g. for hundreds of subsidiaries/associates/join ventures. Most data will be imported so Braiins is not geared towards having large volumes of basic detail entered by hand. As a result its input/edit system are optimised for ease of use, and intelligent prompting, rather than for basic data entry key punching speed. (Though they are still responsive. Everything about Braiins is fast.)

Over the last few decades accounting standards have become ever more complicated, and despite the best efforts of the IFRS, there are still many international/jurisdictional variations in effect, and this is likely to remain the case. Whereas an entity's general ledgers are controlled double entry environments, the financial statement reporting complexities mean that many entities, especially larger ones, use a multiple of spreadsheets and Word documents that are pulled together to produce the financial statements. This has led to numerous errors, some quite serious. Braiins brings that whole situation back under control, without inhibiting flexibility, or making things devilishly complicated. It actually makes it all easier.

Taxonomies can provide a measure of checking when the accounts are output in XBRL form via the Calculation and Formula linkbases, but not all Taxonomies make use of these facilities. The UK ones do not, for example. The UK regulatory authorities, and others, make the assumption that the systems used to generate the accounts provide accounting integrity. That was once the case back in the last quarter of the 20th Century, but is no longer necessarily true. In bolting on XBRL to older system designed for the pre XBRL world, and the demand from Marketing to allow editing on the face of the accounts, plus the widespread use of spreadsheet and Word "accounts generation", integrity and control has been lost. In most case, complete nonsense can be entered, and even be verified as valid XBRL by XBRL gateways.

So, in some respects, despite all the advances in computer power and sophistication, and the advent of machine readable XBRL, accounting and business reporting has gone backwards.

Braiins reverses that negative trend, taking a giant leap forwards, but in a non-intimidating way. In fact Braiins is deceptively simple and easy. Accountants and business people can understand it without having to study a difficult 400 page book like "XBRL For Dummies" or wadw through a 65 slide slide show on "How to Use Dimensions". Everything just works in a natural way, with clear choices at every step. Aspects of the standards/taxonomies that do not apply to a particular entity e.g. Financial Instruments, do not get in the way if the entity doesn't use them.

A big part of the magic by which Braiins reinvents accounting and business reporting is BRL, Braiins Report Language.

BRL, Braiins Report Language.

To explain why BRL a bit of a diversion is necessary.

XBRL adoption is widespread throughout the world, and is well on its way to becoming ubiquitous. So Braiins must and does speak XBRL.

The aims of XBRL are laudable: machine readable accounting/business data that is standardised and comparable across entities. (No XBRL system yet provides for cross jurisdictional comparisons.)

The originators of XBRL and all those who have much put much effort into it over the years, are to be congratulated on their success.

However, in practice XBRL has become complicated and intimidating. In part this is the "arrow in the back" consequences of XBRL evolving on the fly e.g. tuples came and went, the calculation linkbase is being replaced by the formula linkbase before many have even caught up with the calculation linkbase; the table linkbase has arrived recently, and so on. And what the hell is a linkbase anyway?

Any computer system tries to hide the XBRL details, but with varying degrees of success. At least one system even offers editing on the face accounts for both accounting/layout and XBRL. How awful is that? Many or most system end up with some need for manual XBRL tagging.

The common use of the X (eXtensible) feature of XBRL to add entity specific tags, especially in the US re US GAAP, has reduced the utility of the XBRL data.

It appears to us that too much of the XBRL complexity intrudes on the accounting. The ideal is that the computer system should handle the complexity - all of it - while keeping the human part clear, understandable, and usable without special study/knowledge beyond accounting and the relevant accounting standards or company law.

This is where BRL comes in. BRL is a clean 2013 start that builds on the experience of XBRL and the advent of powerful cloud based networks, to hide all the details while retaining the power, and in fact going well beyond what XBRL itself currently offers. The output from Braiins is compliant XBRL as required for regulatory purposes, and Braiins spits that out very quickly e.g. a 40 page set of accounts in a quarter of a second, but the workings are all in BRL.

BRL uses a short (xxxx elements) universal chart of accounts (not taxonomy concrete elements) that makes sense to any accountant. The "accounts" themselves are actually smart objects called BROs or Braiins Report Objects which embody within themselves the knowledge of what sort of data they can hold, what sums (additions) should be automatically performed with the data, and how to convert that data to XBRL output. (One BRO can hold lots of data.) BROs at the base or core of Braiins prevent many errors ever getting started. Higher level checks are performed using a version of the Braiins report generator, as a kind of super formula linkbase, but one which can be easily extended and augmented for various entity types and taxonomies/jurisdictions.

A particular value (number or text) has a BRO or "account" home plus any number of properties (including none) to describe it and to allow analysis in reports e.g. UK, USA etc for a Sales figure, LandAndBuildings, Owned, UK for a Tangible Fixed Asset addition etc.

Properties are a bit like XBRL dimensions, but both broader and simpler. Properties are grouped into Folios, a bit like XBRL hypercubes. (Different names have been used deliberately to avoid confusion.)

Properties describe a value to any desired degree of detail. BRL includes dynamic properties e.g. Officer.BondJ, Sales,Asia,HK,Entity.WongAndCo. In this way the short and simple "chart of accounts" can handle any degree of detail or complexity. People, Entity, Address, and Contact details are held in the database just once but can be referenced as properties, with any edits to the DB values flowing through to wherever that property is used. The property system is flexible and open ended e.g. no 40 Directors limit as in UK-GAAP (UK-IFRS Charles?) , with two forms of dynamic property replacing XBRL tuples or typed dimensions and the X for extensibility of XBRL. There is no need to start trying to think in terms of n dimensional hypercubes (huh?) as with XBRL. Just attach whatever properties are needed or desired to describe a particular value (within controlled limits as per the BRO's knowledge), and Braiins/BRL sorts it all out.

[Charles: You might like to add examples as per your "Multiple Taxonomy CoAs + Impairments" and BRMS emails.

Report Generator

Braiins includes a general report generator, which can produce any desired report as html or a pdf. The report generator is powerful yet easier to use than others because it works with BROs that already have performed many of the required summations, and which know where they can or should not be used, because of their inbuilt knowledge e.g. a Revenue BRO could not be wrongly used in a Balance Sheet report. It is also fast, very fast.

Restated figures are kept track of so that every value in the comparatives of a set of accounts that is affected by restatements can be shown in a different style for example.

Schedule tables for notes fall out easily.

Graphs and images can be embedded.

Progression

RAP [to be expanded] for use by UK Agents (Accounting Practices), English only

Companies including groups

Other jurisdictions

Comparative database for participating entities

Languages other than English

BRMS

ResearchGate type network i.e. comparative database on a big and international scale

General Business Report System for companies as a web service tying in with the above

Pure BRL reports as an optional alternative to XBRL

Technical

For those interested .... cloud using servers NOT in the USA, MySQL and/or Hadoop clusters, HTML5, local storage, compiled PHP, report generator compiles PHP code which is itself compiled = power and speed, OOP (Object Oriented Programming) built in to the heart of Braiins via BROs, .....

All data belongs to the entity and can be retrieved or deleted totally.

End Result

All the computer, XBRL, and semantic web complexity handled transparently by Braiins

Control returned to the Accountant in a way that allows him/her to concentrate of just the accounting, without worry about creating messes

True inter-entity comparability

Cross taxonomy/jurisdiction accounts from one set of raw data

Semantic web integration = full reporting of the whole impact of a business, environmental as well as financial

Full business reporting service and inter entity/country comparisons to any level of detail and sophistication for public company information, and for any other entities which choose to participate with privacy preserved

Clearer, better, less error prone accounting and reporting for all

= Accounting and Business Reporting as it can and should be in the 21st century given the computing power now available to all thanks to the cloud.

All of which also equals a huge business opportunity for Braiins.