

BIC WEIGHTS & DIMENSIONS WORKSHOP – Minutes

Location: CILIP Building, 7 Ridgmount Street, London WC1E 7AE

Date and time: Wednesday 21st September 2016, 2pm-5:30pm

Minutes taken by: Alaina-Marie Bassett

Present

Louise Ang, Macmillan Education
 Alaina-Marie Bassett, BIC
 Graham Bell, EDItEUR
 Paul Costa, Penguin Random House
 Simon Edwards, Consultant
 Matt Griffin, Little, Brown Book Group
 Matthew Hogg, Macmillan Distribution
 Fred Lill, Lill Packaging (Guest)
 Sam Mawson, Egmont Publishing
 Kate McFarlan, Clays
 Eunice Paterson, SAGE Publishing

Alan Rakes, Hachette
 Ian Rogers, Waterstones
 Kieron Smith, Blackwell's
 Ben Sparshot, Egmont Publishing
 Keith Walters, Bibliographic Data Services
 Emma Whiting, Ingenta

Apologies

Karina Luke, BIC
 Fergus Muir, Macmillan
 Peter Skone, Penguin Random House

1. Welcome

SE welcomed the Group to the workshop, confirming that commercials should not be discussed during this session. The Group was reminded about BIC's Competition Law Policy, further information about which can be found here: <http://www.bic.org.uk/149/BIC-Competition-Law-Policy/>

2. Introduction to the workshop and objectives for the session

SE noted that a briefing paper was circulated to this Group prior to this event alongside the agenda. In short, the issue to be discussed arises as a result of there being no best practice documentation in place to inform organisations about how weights and dimensions measurements should be handled in the supply chain. SE noted that the purpose of this workshop is to identify and document all issues experienced throughout the supply chain with regards to weights and dimensions; as such any discussions regarding solutions will be undertaken at another, subsequent event or meeting. SE also noted that shippers are out of scope for the purpose of this workshop – as such pallets and cartons will not be discussed.

3. Group work

The delegates of this workshop were split into three Sub-Groups, ensuring that a range of organisations were present in each group. The following text has been transcribed from the Sub-Group's notes taken on the day with their presentation comments included:

- **Sub-Group A**

This Sub-Group consisted of: GB, PC, KM, AR and KS.
 Notes taken by: GB.

Definitions:

Height (H)

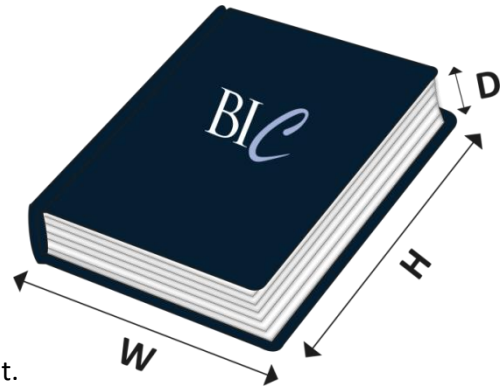
Width (W)

Depth (D) (i.e. spine width)

Mass (M)

Units of Mass: Metric / imperial.

The US use imperial – need to specify the units used and/or supply multiple standardised units for the global market.

**Problems:**

- Lack of data.
- Wrong data (including dummy data) – wrong data is easy to spot whereas dummy data, which uses believable measurements) is a bigger issue.
- Tolerances (but who needs this precision? How accurate does this info need to be?)
- Mass and Depth may change by impression.

Process:

- Publisher specified the height + width + extent (so they should be correct).
- Extent and paper type used to calculate depth and mass – these are calculable within 5g or so.
- No standards for pack size.
- No routine for passing real depth and mass measurements back to publisher if the information provided is incorrect.
- Quite simple to communicate, i.e. in ONIX.

Problems II:

- Publisher not always aware of the need for accuracy (“it just fits in an envelope or on the shelf” – this is particular to publishers that are not DSO distributors). Education is therefore needed in this area.
- Lack of trust along supply chain (this may be to do with tolerances or variation among publishers); this results in multiple organisations measuring as they don’t trust the data received and the accuracy of the metadata is critical to their work.
- The metadata is inaccurate enough to make it worthwhile for organisations to measure it themselves, i.e. one cost to offset another, greater cost.
- Dummy data (i.e. stating a book is 0.1g / 500g).
- For distributors, not too much of a problem because it is part of the goods-in routine. (May vary – there’s some disagreement on this point in this sub-group).
- For retailers, it’s more expensive.
- Timescale – is data being supplied too early a problem? Any data is better than providing no data – providing the measurements are based on realistic calculations

(and not a dummy figure). (Retailers need weights and dimensions metadata 2-5 months in advance of publication ideally, so estimates are required).

Import / Export:

- Data tends to be accurate as it comes from distributors/wholesalers, not publishers.
- Changes in depth and mass can occur between impressions.
- Change of depth and mass when a book goes from litho-printing to digital printing, i.e. Print On Demand (POD). Publishers often don't update their data between impressions.
- Change for special edition that (wrongly) doesn't get a new ISBN. If the edition differs a new ISBN should be assigned.

Potential solutions:

- Timeliness – should be supplied 3-4 months before publication date and needs to be realistic / as accurate as possible. If this is not achievable then this information must be updated as soon as the figures are known.
- Trust – publishers should decide this.
- Feedback from printer to publisher.
- Data aggregators might trust the wrong data (is the hierarchy of trust correct?)
- System vendor should not enable defaults or dummy data.

GB left the workshop at this stage in the event.

- **Sub-Group B**

This Sub-Group consisted of: MG, SG, EP, IR and EW.

Notes taken by: EP.

Capture difficulties:

- Publisher captures + p.s. Not finished book size.
- Page extents can change up until going to press.
- Paper can change from printing to printing.
- Ingenta don't feel the problem but want to understand how system developers can help / whether system(s) need further development and how.
- Hachette capture bulk – but paper bulks can change. Every delivery is measured and weighed by Hachette Distribution using CubiScan; Waterstones use this also. Digitally-obtained measurements ensure accuracy.
- How about novelty books? How do we measure?
- Hardback / paperback: Starting point. Then spin out.
- Who measures / needs to measure cube?
- Publisher Distribution Centres (DC) + systems may be capturing measurements differently.
- Batch / version control issues, i.e. data on reprints

- US = imperial = height x width
- UK = metric = width x height
- EU?
- Is there common understanding on what height / width / depth is?
- Not all publishers capture final book size.
- All data is there, expressed differently, captured by different people at different times but probably not fed back to the publisher supplying basic metadata.
- CubiScan can be used for working out volumes for a tote.
- If incorrect dimensions are found, this is not fed back up the chain.
- People are unaware of the problem.
- Some DCs are not working to a tolerance. If given dimensions don't fit, it has to wait for a suitable stock. This can delay publication.
- Big launches = more need for accurate information.
- DCs need information 2 weeks prior to publication date.
- Publishers work to different lead times from availability in a DC to publication date.
- Need to understand all lead times all the way down the supply chain (+ impact of % tolerance on all / every dimension and attribute – to each participant).
- Do publishers / their warehouses round up weights?
- Are sizes also overstated?
- Can all printers be persuaded to purchase a volumetric tool to measure a book? Would be useful to produce a pyramid diagram to see the scale of the work involved (showing the time it takes to measure, the number of times a book is re-measured, where the pain-points are and what costs are involved).
- Can printers work out an efficient way to feed dimensions into publishers' systems, then publishers' systems to metadata. Efficiency / timing issue.
- DC capturing dimensions at the last / near final delivery adds most cost?
- Would DCs differentiate between CubiScanned information and estimated data?
- DCs would need to receive data via Nielsen.
- Measurements carried out by printers can be theoretical.
- Retailers have to measure books currently so an agreement could be made between publishers and retailers for a fee.
- Waterstones is collating information about incorrect weights and dimensions metadata for the purpose of analysing which products are most often inaccurate and feed this back to their business partners. The Group agreed that the information collated could be incorporated in this Project / any forthcoming documentation.
- If a line costs retailers more to send than expected, only then will these titles be measured.

- **Sub-Group C**

This Sub-Group consisted of: LA, MH, FL, BS and KW.

Notes taken by: FL and AMB.

Finished size:

- Awaiting actual weight of produced book rather than using theoretical specifications upon receiving Purchase Order (PO) from publisher – height and width are more important than depth and mass and are often more accurate.
- Amazon Standard Identification Number (ASIN) – some organisations send theoretical weights and dimensions information to Amazon and this has reportedly never been rejected, i.e. they do not inform publishers if the information provided is incorrect / inaccurate. Inaccuracy therefore causes additional work / costs for Amazon too.
- Print should be able to confirm measurements within an agreed tolerance.

SM left the workshop at this stage in the event.

Problems:

- Sending single item – dependent on Royal Mail's / couriers' maximum weight for each letter/parcel and its corresponding price, e.g. 100g / 250g / 500g / 750g
- Sending multiple items – courier final box weight and size
- Less Than Load (LTL) shipping – palletised products require known weights
- Inaccurate data slows logistics
- Goods-in inspection at distributor to check weight
- Returns – different editions might have a variety of measurements attributed to them but use the same ISBN
- ISBN should be changed if the variation is outside the specified tolerance
- No global, standardised product / book sizes
- Information provided upstream of distributors is not trusted
- What incentivises a publisher to provide accurate weights and dimensions data and continue to update it, when required?
- Pagination and the board of a book can change but by the time the specification goes to the printer these specifications should be agreed and it should be possible to calculate the weight / dimensions measurements required from this information.
- Is it better to estimate a measurement or wait until the figure is known? If estimated, how will recipients know the figures are not actual measurements?
- Specifications are not monitored by publishers as they do not use this information internally however the spine width will be known in advance of printing.
- Weights & dimensions are required most prominently for taking pre-sale orders.
- Is it possible for organisations to accept that the initial information provided by publishers is pre-press and is therefore estimated? Once the final spec is known / gone to the printer, this data can then be updated.
- Are the updates reaching everyone they should be?
- Distributors often weigh books if the mass isn't provided by printers; the goods-in process includes measuring the weight of the box. If more than one warehouse is used, is this an issue?

- A tolerance is always required as there are often subtle differences in the measurements supplied compared to the product itself.
- A new ISBN should be assigned if the paper / board etc. of the product is changed, as the weight of the product will differ from the former product.
- Removal of finishes, such as embossing, can cause a difference in product's weight – a standard to calculate this sort of difference should be devised.
- Printers should be able to provide the weight and dimensions of a product with very little tolerance required.
- Tolerance should be calculated as a percentage rather than a measurement, i.e. within 2% of the product's weight rather than +/-2g. This is essential for products such as boxsets which, if miscalculated, will definitely breach the tolerance used at present.
- There are differing standards for book sizes globally; UK + EU are the same but the US uses different standard dimensions.
- Data aggregators / library suppliers experience issues if the information they provide, which their customers use to inform their purchases, is incorrect.
- Asking printers to take weight and dimension measurements will mean that each printer used will have to provide this information. Giving distributors the sole responsibility reduces the number of times a product needs to be measured to one.
- If a printer uses a paper that is not specified by the publisher in their PO, publishers very often have to accept this stock due to the urgency with which it is required. This issue can come about for various reasons including the desired paper being out of stock but causes inconsistencies between the metadata and the product's weight.
- It would be difficult for publishers to check that each and every order they receive is as per the PO – they have to trust the printer to produce the product as specified.
- Incentive for publishers to ensure their metadata is accurate: container shipping costs; to avoid bad feedback from customers if the book is larger / smaller than expected or they have overpaid for the product's postage.
- If figures are provided by both printers and distributors, the figures provided by the distributor are likely to be trusted / used.
- Could publishers provide accurate weights and dimensions by measuring the first / prototype book produced – before the product is sent to print en masse?

4. Feedback on the issues raised

- AR noted distributors add a tolerance to the weight of a box / pallet however, if the weight of the book is wrong then the tolerance won't suffice and the delivery will be rejected.
- KM explained that the publisher starts the process of measuring by providing estimated data, the printer then produces the book and it arrives at the DC; the DC verifies the data provided and feedback is sent (by exception) to the publisher and retailers.
- EP reported that some publishers only record the trim size of a book rather than the finished book size.
- MH suggested that weights and dimensions information could be disseminated by

distributors alongside / with other sensitive information such as Price & Availability (P&A) feeds.

- LA noted that tolerances can lead to the product size marginally increasing (beyond the tolerance specified) over a period of years.

5. Prioritising the issues

- Remove dummy data

Educating organisations in this area. EW suggested that this issue is a result of the mandatory field in ONIX, meaning that a figure must be included and if the accurate figure is unknown, an estimate will be entered. SE suggested that retailers could be approached to find out which organisations are supplying inaccurate data on a regular basis and BIC could approach these organisations regarding their system, the printers / distributors they use, and provide information about best practice. IR noted that the information being collated by Waterstones will not be available for this purpose until mid-2017. He agreed to share this information with BIC once the work is completed.

- **ACTION:** IR to send notification to AMB when Waterstones' project is complete.

- Agree acceptable tolerances

SE noted that, currently, organisations have their own individual tolerances in place. The Group agreed that tolerance should be a percentage of the product's measurements rather than being specified in millimetres / grams etc. SE suggested that BIC could approach organisations to find out what their tolerances are, collating the information to inform the percentage going forwards.

FL noted that it will be more difficult to identify inaccuracy if the tolerance is a percentage as it's easier to see if a product is incorrect by 2mm than 2%. EP suggested that the percentage should be rounded-up so that if the measurements are marginally incorrect, they will at least be sufficient for requirements by distributors / retailers. KS noted that accurate information is still the preference as inaccuracies, whether over or under the product's measurements, have an effect on sales and costs. LA also noted that inaccuracies in weights and dimensions metadata can cause damage to the product. KM left the workshop at this stage in the event.

- Providing weights & dimensions metadata

The Group agreed that realistic, estimated measurements should be provided in the absence of accurate measurements. EP suggested that there should also be an onus on publishers to inform the supply chain about any changes / updates to this information. PC confirmed that publishers already update this information via ONIX however it was noted that some publishers accept and disseminate the theoretical figures supplied by printers. The publishers in attendance agreed that, until this workshop, they have not received feedback from their customers to suggest that supplying the theoretical information is inadequate.

- Responsibility

The Group discussed which organisation type the responsibility for providing accurate metadata should lie with going forwards. EP suggested that printers should be made responsible for providing the initial estimated metadata while DCs should provide the accurate metadata as part of their goods-in process. PC noted that it will not benefit publishers if they receive this information from multiple sources (i.e. three differing printers); he suggested for this reason that DCs should have the sole responsibility as a trusted entity – the information provided by any untrusted sources / distributors should be checked for accuracy (with the onus on the publisher to do so).

LA, KS and KW left the workshop at this stage in the event.

PC noted that this idea is feasible with trusted organisations / partners however publishers cannot control what happens to their data once it has been disseminated more widely. FL asked whether a tolerance could be added by printers to their PO but EP noted that this would be difficult.

IR and AR left the workshop at this stage in the event.

6. Final round-up and next steps

SE noted that BIC will now collate the information, suggestions and priorities put forward by the attendees of this workshop, with a view to an action plan being produced for next steps. SE thanked those still present for attending.

Weights and Dimensions in ONIX

Information about the size and weight ¹ of a physical book products is vital to printers, distributors and wholesalers, and to retailers. However, it is *not* always treated with such importance by publishers who are the original source of much of the metadata in the book supply chain. As a result, data from publishers is often missing from industry-standard ONIX metadata files, or provided only after delivery of copies from the printer, and where present, measurements are treated by data recipients with a relatively low degree of confidence. This can mean unnecessary costs for supply chain partners: distributors and wholesalers often duplicate the work of measuring the book-in-hand at goods-in, and retailers have to make guesses about shipping costs to consumers who place orders prior to publication.

And yet ONIX data files can contain all the necessary metadata, and even prior to any book-in-hand measurements, relatively accurate calculations of size and weight can be made.

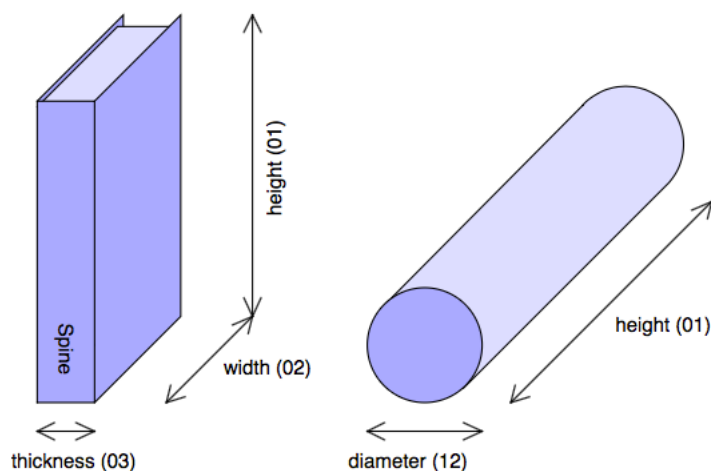
The ONIX <Measure> composite

The <Measure> composite is a repeatable structure that can carry one dimension of measurement per repeat. It is identical in ONIX 2.1 and 3.0. It takes the form:

```
<Measure>
  <MeasureType>01</MeasureType>
  <Measurement>197</Measurement>
  <MeasureUnitCode>mm</MeasureUnitCode>
</Measure>
```

where <MeasureType> is a code taken from ONIX Codelist 48 that specifies the dimension of the measurement (height, width, weight *etc*), <Measurement> is the numerical measurement itself, and the <MeasureUnitCode> specifies the units – imperial or metric – used. In this case, it means the product is 197mm in overall height.

The whole structure can be repeated for different dimensions or units. Typically, an ONIX record for a physical product should contain the overall product height, width, spine thickness and the weight. It is good industry practice to provide the necessary measurements as early as practicable, and at least 16 weeks prior to publication – given the expected timescale, it is completely normal to provide the measurements based on specifications provided to the printer, without waiting for confirmation of the exact dimensions from the manufactured book-in-hand.



The diagram shows the codes from List 48 that are used in <MeasureType>. As an absolute minimum,

¹ or more correctly, mass

the overall height (01) and width (02) should be provided for all books. For products such as maps or posters, both folded (or rolled) and flat measurements should be included whenever possible, but if only one set of dimensions can be included, the folded (or rolled) sizes used at retail and for shipping are preferred. (The table at the end of this document lists some additional codes, and some equivalent codes used in EDI messages.)

Use metric measurements (millimetres for height, width, thickness, and grams for weight). Additionally, repeat the same measurements using imperial units (inches, ounces) if the product will be for sale in the US. It is not unusual to have six or eight repeats of the <Measure> composite in an ONIX record. When sending measurements in ONIX, work to the nearest millimeter, or the nearest 1/8 inch, or for weight, the nearest 5 grams or 1/8 ounce. When receiving measurements, recipients should treat linear measurements as having an expected accuracy within ±2mm or ±1/8in, and weights with an accuracy of ±5gr or ±1/8oz. This is enough to account for typical commercially acceptable manufacturing tolerances, and minor variations in weight due to paper humidity.

Common issues

Never provide zero, 1, -1 or any other number in place of unknown measurements (in fact, in ONIX 3.0, a zero or negative measurement is not valid).

And never provide 'default' measurements – a seemingly 'reasonable' default figure is much worse than no information at all, as retailers might for example use it to calculate carriage costs for your product.

For unknown measurements, simply omit the relevant <Measure> composite.

Never confuse overall height and width with the trimmed page size. Publishers use the TPS to specify the physical size of the book to the printer and binder, but other parties in the supply chain require the overall size. For paperbacks where the cover is trimmed flush with the book block, the two sets of dimensions are identical. For hardbacks and many other forms of binding, the two are different – and those extra few mm may be critical.

It is good practice for the publisher to supply the overall dimensions, but ONIX can include either or both sets of measurements – for example code 01 in <MeasureType> indicates the overall height of the product, and code 04 is the trimmed page height. So, for an example Demy hardback:

```
<Measure>
  <MeasureType>04</MeasureType>
  <Measurement>216</Measurement>
  <MeasureUnitCode>mm</MeasureUnitCode>
</Measure>
<Measure>
  <MeasureType>01</MeasureType>
  <Measurement>223</Measurement> <-- 216mm + board allowance -->
  <MeasureUnitCode>mm</MeasureUnitCode>
</Measure>
```

If for any reason only the TPS is supplied, ONIX senders and recipients should ensure TPS height and width are not confused with the overall dimensions – use the right Measure type code.

A good estimate of the overall dimensions can be calculated from the TPS relatively simply, based on the product form: for example, with hardbacks, the overall dimensions are 6–8mm larger in both height and width than the TPS, to account for the projection of the cover boards beyond the book block.

The overall height, width and thickness should always *include* any retail packaging (for example, slipcases, jewel cases or boxes) in which the product is supplied to the consumer.

Just as the overall height and width are different from the trimmed page size, the spine thickness is not the same as the thickness of the book block prior to addition of the cover. The book block thickness can be calculated with reasonable accuracy if the production extent² and the bulk or caliper (sheet thickness) of the paper is known. The overall thickness includes an allowance for the cover material (boards, any decorative board covering, the jacket *etc*). Where calculated dimensions are provided, the publisher should update the metadata as soon as actual dimensions are known.

The weight of the product can also be calculated in advance if the production extent, paper weight (GSM), board weight are known. Allowance might be needed for different grades of paper in any plate section or insert. However, it is recognized that publishers may not always be able to provide this 16 weeks in advance because of continuing uncertainty about the extent or even the paper grade. The data should be provided as soon as a reasonable calculation is available, and updated after manufacturing as soon as actual an actual weight is known.

Publishers should ensure they update their metadata if any measurements change significantly. This is likely to happen when a reprint uses a different grade of paper, or when the product transitions to a different printing method (*eg* litho to xerographic 'print on demand'). Minor variations such as changes in weight due to varying paper humidity are unlikely to be significant.

The table shows the codes from List 48 that can be used in ONIX, plus their EDI equivalents:

ONIX codelist 48		EDI 6313 equivalent (mandatory in MEA segments)
01	Overall height	HT
02	Overall width	WD
03	Overall (spine) thickness	TH
04	Trimmed page height	
05	Trimmed page width	
08	Unit weight	AAA
09	Diameter (of sphere)	
10	Unfolded sheet height (of map, poster etc)	
11	Unfolded sheet width (of map, poster etc)	
12	Diameter (of round tube)	
13	Side (of square or triangular tube-shaped package)	

Note that measurements in EDI should always be overall dimensions, not trimmed page sizes.

Graham Bell
EDItEUR
4 Oct 2016

These notes are adapted from the *ONIX 3.0 Implementation and Best Practice Guide* (DOI: [10.4400/zuim](https://doi.org/10.4400/zuim)), but apply equally to ONIX 2.1.

² the production extent includes any front and back matter, blank pages *etc* that may not be included in the more conventional extent. Allowance should also be made for plate sections *etc*, which may be manufactured on a different grade of paper