

NA²⁷ in SESB 1.0. A first look

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- [1] For the first time in history, a critical apparatus to the biblical text is available in electronic form. SESB even contains the most widely used biblical texts, namely BHS and NA²⁷, both with their apparatus. In this respect, SESB is groundbreaking.³ In this review article I will concentrate on NA²⁷, and even further mostly on its apparatus: what are the possibilities, surprises, limitations and future prospects of the implementation of NA²⁷ in SESB 1.0? BHS and its apparatus will be regularly drawn into the discussion for comparison's sake. Since SESB is rather limited in its documentation, quite a few examples of searches and the like will be given here.

Introduction

- [2] Why do we have editions of the biblical text with a critical apparatus, in which variant readings are recorded? There is actually only one reason: to constantly remind us of the fact that the text we read now went through the hands (and minds) of human writers, scribes and editors before it finally reached us. Those who let this historical truth sink in, all other things shall be theirs as well.
- [3] Two ways could be followed to review a product such as SESB – of course, the fact that the apparatus is finally there says it all, but some questions still have to be asked –, depending on whether one is an idealist or a realist. The idealist would ask: suppose we have a the critical apparatus and the text that comes with it (note the perspective), what would I like to be able to do with it? A hyper-idealist would even ask: what kind of edition with a critical apparatus would be ideal? The realist would ask: 'Wow! this is fantastic. Let me see what can be done with it!' In this review, I will follow the 'realist' approach, albeit inevitably coupled with some 'idealist' insights.

Contents

- [4] SESB includes an electronic edition of NA²⁷ (NA²⁷-SESB), divided in two parts, text and apparatus, which will be called here NA²⁷-SESB_{txt} and NA²⁷-SESB_{app}. To be more precise: the two 'databases' correspond to the two most important parts of the printed edition, namely its fully formatted biblical text and its apparatus. The former comes

with the foreword and the latter with the introduction and Appendix I, the list of manuscripts.

- [5] It should also be noted that the electronic edition corresponds to the eighth printing of NA²⁷ (2001), which is the most recent one.⁴ Thus far I have seen no traces of subsequent corrections or changes.⁵

Connections

- [6] NA²⁷-SESB_{app}, of course, is closely connected to NA²⁷-SESB_{txt}.⁶ In the software, the two databases are linked directly by means of the text-critical signs in NA²⁷-SESB_{txt} and the verse headings in NA²⁷-SESB_{app}: when the user clicks on a text-critical sign in NA²⁷-SESB_{txt}, its *target*, the corresponding variant in NA²⁷-SESB_{app}, is displayed (at the top of its window),⁷ and when the verse heading is clicked in NA²⁷-SESB_{app}, the corresponding verse in NA²⁷-SESB_{txt} is displayed. The partner database is even opened when this was not already done. The connection is also visible in a pop-up information window, which appears when the mouse hovers over a targeted reference in either NA²⁷-SESB_{txt} or NA-SESB_{app}.⁸
- [7] One can also add *synchronisation* by assigning both parts to the same ‘set’.⁹ As a result, when browsing through either NA²⁷-SESB_{txt} or NA²⁷-SESB_{app}, the other one is instantly updated. This feature is especially handy when browsing search results. It is further advisable to use some colours, in order to distinguish more easily the different types of information in the databases. Colours can be set in the *dialog* that appears when choosing Tools, Options, Keylink.

Comparison with the printed edition

The text

- [8] As said, the electronic edition does not contain everything that is found in the printed editions. The following tables show the differences.
- [9] Comparison of the printed edition (NA²⁷, eighth printing 2001) with NA²⁷-SESB_{txt}:

	NA ²⁷ , printed edition	NA ²⁷ -SESB _{txt}
preface	German and English	German and English
old numbering systems	inner margin	–
Eusebian canones	inner margin (Gospels)	– (separate Bible tool)
scriptural references	outer margin	–
list of (OT) citations	appendix IV	– (searches are possible)
layout	fixed	(partly) adjustable

- [10] In BHS-SESB_{txt}, the outer margin of BHS with the masora parva and the lines below the text with the reference to the masora magna are not available. The layout of the biblical text itself is also somewhat differently: even in prose, each verse (after : or the pericope marker) starts on a new line.¹⁰

The apparatus

- [11] Comparison of NA²⁷-SESB_{app} with the printed version (hard copy) of the apparatus:

	NA ²⁷ , printed edition	NA ²⁷ -SESB _{app}
searchable	–	yes (but not fully)
combinable with other sources	only indirectly	directly (linking)
explanation	introduction (and secondary sources)	introduction ¹¹ ; pop-up information or information window ¹²
reference	chart	pop-up information
additional information	appendices	pop-up information + appendix I (most of it)
layout	continuous text	single verses; new paragraphs for each variation unit and subparagraphs for each variant reading

- [12] The apparatus ends with Appendix I (Codices Graeci et Latini), though without explanation of (1) the sigla (e a p r are explained) and abbreviations; (2) f^1 and f^{13} ; (3) the list of minuscules that belong to \mathfrak{M} (\mathfrak{M} as such is explained).
- [13] In conclusion, not everything is present in the electronic edition, which can be regretted. In BHS-SESB, the situation is even less favourable, for no introduction (the Prolegomena) or even foreword is provided there.

Searching

- [14] There are several compelling reasons for the ever increasing popularity of electronic editions. For instance:
- (1) ease of distribution; Libronix's successful business model is largely based on this aspect.
 - (2) adaptability; corrected versions can be distributed rather easily; moreover, data that is available electronically can be converted, reused, enhanced and combined with other sources.¹⁴
 - (3) connectivity (hyper-linking/jumping); many kinds of connections are possible, depending of course on the way the data is implemented; in the Libronix system, for

instance, one can easily connect a modern bible translation with the Nestle-Aland apparatus.

- (4) less kilos (portability); ever since I can use BDAG in electronic form, I rarely open my *hard copy* any more.
- (5) search possibilities; these are probably the most important *feature*, and much of an electronic edition's quality depends on these.

Simple searches

- [15] The simplest form of searching is the *basic search*. Some text is entered in the search box, *et voila!* The same can be achieved by right clicking on some item of interest and choosing the search from the contextual menu. For instance, searching for $\iota\eta\sigma\upsilon\varsigma$ gives all the instances of $\text{'}\iota\eta\sigma\omicron\upsilon\zeta$ in the apparatus. Somewhat more subtle is $\iota\eta\sigma\omicron\upsilon^*$ (or $\iota\eta\sigma\omicron^*$), which covers all possible forms of $\text{'}\iota\eta\sigma\omicron\upsilon\zeta$.¹⁵
- [16] There is however a serious limitation to this way of searching. For instance, searching for 2 this way finds “2” in many different meanings:
 - min. 2
 - \aleph^2 (but for some reason not B^2 etc.)
 - 3 1 2
 - ...

Field searching

- [17] There is, happily, a way to disambiguate the information you are looking for: *field searching*. Fields allow to search for specific parts of text, that is, as far as these have been distinguished and marked in the preparation of the electronic edition. The search can be far more focussed using field searching. For each resource in Libronix, explanation of the fields can be found by choosing ‘About This Resource’ in the Help menu (see also the appendices below).

Field searching in NA²⁷-SESB_{app}

- [18] In NA²⁷-SESB_{app}, three categories of fields can be distinguished, to wit (1) the type of variants, (2) the type of attestation, and (3) other.¹⁶
- [19] The various types of *variants*¹⁷ can be searched for, for example:

add:τα : a list of all variants which involve the addition or insertion of τά.

It should however be noted that different types of variants are often combined in the apparatus.¹⁸ Variants apparently presented as substitutions or transpositions may contain omissions or additions, etc. As a consequence, search results cannot be complete.

At Mt 6:14, for instance, the word οὐράνιος is marked with the sign Ϛ, which makes one expect a substitution (it was actually found by searching for replace:τα). However the apparatus contains both a substitution and an addition:

Ϛ p) εν τοις ουρανοις Θ 700 it Ϛ p) ουρ. τα παραπτωματα υμων L f¹³ l 844 pc lat sa^{mss} bo mae; Did

- [20] Note also the space-saving practice of using abbreviated forms of words in the apparatus: ουρ. stands for ουράνιος. Just as everything else, this aspect of the printed edition is taken over in SESB. As a consequence, searching for ουράνιος would not find this instance.

- [21] One would not expect omit:τα to give any results, and that is correct, but sometimes some Greek text is actually mentioned in the attestation of omissions.¹⁹ This phenomenon further illustrates the inevitable ‘fuzziness’ of the printed apparatus.²⁰

transpose:* : all transpositions

- [22] Types of *attestation* can also be searched for. I will give some examples of each category.

papyrus:p79 : all instances of Ϙ⁷⁹.

Here the so-called ‘wow’ factor is particularly high: one can now rapidly find the places where for instance Ϙ⁹⁹, one of the newly added papyri, is actually cited in the apparatus.²¹ When searching for papyri, the search works best if one includes the letter ‘p’ before the number. The fact that this ‘p’ is almost required is undocumented, and it took me quite some time to find out that this is the best way.²²

- [23] Uncial Greek manuscripts:

uncial:04 : finds all instances of C (Codex Ephraemi rescriptus).

There is, regrettably, no way to distinguish between two manuscripts which have the same siglum, for instance F:

uncial:09 : finds all instances of F, both 09 (Codex Bezae Cantabrigiae in Utrecht) – and 010 (Codex Augiensis).

This is still the best way to find F (09), even though somewhat surprisingly F (010) (Codex Augiensis) is also found.²³ The reason is simple: the ‘footnote’ information on F always contains the information on both F 09 and F 10; the search actually finds the occurrences of ‘09’ in these footnotes.²⁴

- [24] As a further consequence, there is another problem with uncial:09, for the search also comes up with 0162 (for instance at John 2:12 Ϙ); the reason is that ‘09’ happens to occur in the footnote description of 0162 as well. This is a problem for which I do not

have a solution, other than that some experiments show that uncial:010 works better, for '010' does not occur in the description of other uncials.

[25] Minuscules can also be found easily:

min:2427 for the instances where attestation of the intriguing manuscript of Mark's gospel in the Edgar J. Goodspeed Collection, University of Chicago, is given.²⁵

[26] Some special treatment is required for the Lake and Ferrar group (f^1 and f^{13} , after the first minuscule members of the families).²⁶ A search such as min:1 does not give min. 1 only, but also f^1 , for min. 1 (1^e) is treated as part of f^1 .

[27] The problems with footnoted information observed above recur here: for instance, the search min:918 gives the unique occurrence of min. 918 in NA²⁷-SESB_{app}, to wit at 1 John 5:7-8 ' (a famous reading), but also Lk 3:23-31 ' , triggered by the occurrence of the shelf mark number 918 in the description of minuscule 1555. I do not know how to circumvent such problems.²⁷ The same problem occurs with the lectionaries (lect), but it happens to be only theoretical here, because there are only a few lectionaries ever cited in the apparatus.

[28] One can further search for Latin attestation (latin), other versional attestation (versions), and patristic attestation (fathers).

fathers:acac gives the one instance in which Acacius Caesariensis is mentioned in the apparatus (Mt 23:31-32 ').

[29] One could of course use the abbreviations without the field name, but then the same problems of interference with footnoted information may recur. For instance, the word 'Cass.' happens to occur in the description of uncial T (029), so that cass finds more than just Cassiodorus; fathers:cass gives the desired results.

[30] Among the four *other* fields, *txt* and punctuation are the most interesting.

punct:* yields a number of punctuation variants.

The search, however, only gives those instances of punctuation variants in which some text is present between the brackets.²⁸ Thus Mt 2:4 [' et ' :1 ;] is found, because of the word 'et', but Mt 7:4 [' .] is not.²⁹

txt:* gives the variants with so-called 'positive apparatus', in which also the attestation for the text that is adopted is indicated.

[31] The field footnote offers some interesting possibilities as well. As we have seen, the information contained in the footnotes (the pop-up information) often interferes with normal searches, but this phenomenon can sometimes be turned into an advantage. For instance, it seems not possible to search \mathfrak{M} ('Majority text') directly, but some

creative thinking offers possibilities such as footnote:narrow (or even simply narrow), since the word ‘narrow’ only occurs in the pop-up description of \mathfrak{N} .

- [32] Similarly, the text-critical signs can be found indirectly using the footnote field:

sign	found with	sign	found with	sign	found with
⌈ ⌈ ...	exact(replaced)	:	colon	Ⓟ	pericopes ³⁰
◦ ◻	omitted	†	cross	Ⓢ	septuagint
Ⓢ	transposed	‡	vertical		
⌈ ...	inserted	+	clarity		

- [33] One can even distinguish between ⌈ etc. and ⌈ etc., for the footnote on the second also contains the word ‘transposition’. Similarly, compared to ◦ the footnote on ◻ also contains words such as ‘clauses’.
- [34] Intriguing is the field name nothing: can one search for nothing, and then actually find something? That sounds more like *theologia negativa* than like textual criticism ... It actually concerns the few parts of the apparatus that are not linked directly to the text by means of the well-known critical signs. In particular: (1) text-critical information on the subscriptions of the Pauline epistles (Rom-Heb);³¹ (2) the general text-critical information on several passages within double square brackets, to wit the secondary endings of Mark, Luke 22:43-44 and Rom 16:25-27;³² (3) a reference at Lk 3:38, informing the reading that the closing sign ` corresponds to the opening sign (⌈) in 3:23 and a similar reference at John 18:24 (⌈), referring to 18:13.

Field searching in NA²⁷-SESB_{txt}

- [35] Of particular interest for textual critics are the fields (aliased as) *OTQuote*, *DisputedPassage* and *LaterAddition*. Some examples:

otquote:* : all passages marked by the editors as Old Testament quotations (the portions printed in italics); as a bonus, the number of words of each citation is indicated.

- [36] However, the total number of OT quotations is not easy to estimate, because the search can be done at the level (‘granularity’) of verse, section, bible book, chapter or sentence (see *Advanced Search*), but not by ... OT quotation.

lateraddition:* : all passages between double square brackets.³³

disputedpassage:* : all words or combinations of words in single square brackets.

- [37] It is important to turn *search by verse* on (and not search by section). It should also be noted that these searches technically mean: ‘give any word in a passage marked-up with the field name “lateraddition” ’ etc.

- [38] The NA²⁷ contains some thirty instances where only parts of words are enclosed in square brackets (e.g. Acts 16:12 *πρώτη[ς]*). Regrettably, the search field *disputedpassage* does not encompass these cases.³⁴ Searching *πρωτη* finds Acts 16:12; searching *πρωτης* does not. This is not correct behaviour, for the text enclosed in (single) square brackets is actually to be considered as part of the text.
- [39] The choice of term ‘disputed passage’ – but what’s in a name? – would actually strike textual critics as somewhat odd.³⁵ Anyone familiar with the history of the modern critical text knows that the brackets are often used as a sort of compromise measure when the Committee responsible for the new text remained divided. Therefore ‘disputed passage’, in this case, means ‘disputed reading’ by the Committee. The false impression should be avoided that the possible collection of New Testament readings which merit discussion and even divergence of opinion among textual critics coincides with the set of 541 instances of variant readings at which part of the text that is adopted is actually marked with square brackets. At the one hand, the presence of square brackets (as well as its use) is subject to debate; at the other hand, the absence of square brackets by no means implies textual certainty. The Committee made an edition (better: decided on one form of the text) and expressed its opinions, but these opinions should not be held to be *ex cathedra* statements on textual certainty.³⁶
- [40] The term ‘later addition’ could do with some clarification as well.³⁷ It should in any case be possible in a relatively easy way to study the biblical text without these passages. Think only of Markan style with or without (or within) the longer and shorter ending.

Complex (enhanced) searches

- [41] Very important is the possibility to combine fields, for instance:³⁸
- txt:uncial:A* : all instances in which A (codex Alexandrinus) is mentioned as part of the attestation of the text adopted in the edition.
- omit:uncial:B* : all instances in which B (codex Vaticanus) is mentioned in a variant readings which involve an omission of words (compared to the text adopted in NA²⁷).
- One can even search ‘deflections’ within *f*¹ or *f*¹³, for instance
- min:1 ANDNOT "f 1"*.³⁹
- [42] Surprisingly, *txt:footnote:narrow* (Ⲙⲗ as part of the *txt* attestation) does not give any results, nor do any other combinations of *txt:footnote:...* The reason is that *txt:narrow* does not find anything. This means that footnote information is not searched as part of the *txt* field.⁴⁰

- [43] Searches cannot be limited to part of the apparatus by indicating a Bible range, as one ordinarily does for Bible searches,⁴¹ but using the AND operator does the trick:

transpose:* AND "1 Johannes" : all variants marked as transpositions in 1 John.⁴²

- [44] It is essential to use the German book names as shown in NA²⁷-SESB_{app}.⁴³ One can even limit the search to a chapter, by using "Markus 1,*"; here the comma and the asterisk are essential, for if the comma is left out, instances in chapter 10 and higher are found as well.

- [45] The Libronix system provides several special search techniques, which can be applied to NA²⁷-SESB_{app}. Careful study of the section 'Advanced Searching' in the general Libronix Help file is therefore highly recommended. Some examples may be given here:

transpose:case(a) OR transpose:case(p) : a list of all variants marked as transpositions, in which the lower-case 'a' or 'p' occur.⁴⁴ This list presumably contains, among other things, all variants for which the special sign ^s is used, for the place of the transposed word thus marked is indicated by either *a.* (*ante*) or *p.* (*post*).⁴⁵

papyrus:"/p[:Nd:]" (or papyrus:"/p\d") : all citations of \wp^{1-9} (strictly speaking also \wp^0 , but that number is of course reserved to the original which has been lost).

omit:uncial:"/[L:]" (or omit:uncial:"\AD") : citation of uncials which have character sigla, not numbers.⁴⁶

uncial:⌘ before 1 word uncial:B : attestation of ⌘ B without A (to include the possibility of A, use uncial:⌘ before 2 word uncial:B).⁴⁷

pm before 1-40 words pm before 1-40 words pm : a list which contains all variation units in which \wp is split into three times *pm*.⁴⁸

exact(omitted) before 1 words vs : all variants which involve the omission of an entire verse.⁴⁹

uncial(⌘) before 1 words original before 1 words corrector : a list which contains all instances of \wp^{*-2} .

textus BEFORE 1 WORDS /(replaced|omitted|transposed|inserted)/ : a short list among which some instances of 'small attestation' for *txt*.⁵⁰ The verse boundaries prevent the search from finding all important cases.

It is also possible to search for accented Greek in the apparatus, e.g. marks(ῆ).

Missed opportunities/limitations/desiderata

Searching

- [46] It is currently not possible to directly search special characters, such as † or · (which belong to the critical apparatus) (but see above for the ‘footnote’ technique). Similarly, it is not possible to export a verse list from the search results. Further, it seems not possible to search for any of the following:
- **⋈*** only, excluding **⋈**;
 - all variants in which B is cited as supporting one of the alternative readings and not *txt*;
 - other special combinations: instances in which the text, *according to the apparatus*, differs from both **⋈** and B;
 - instances of ‘et’ which **do not** occur in ‘footnote’ text;
 - instances of the addition of the (corresponding) article just before the word ‘Jezus’ (a form of Ἰησοῦς) in the text; in general: combine searches of something in the apparatus with some aspect of the text.
- [47] It seems not possible to limit searches in NA²⁷-SESB_{txt} to the text without the ‘later additions’.
- [48] It would also be nice to be able to perform some statistic analysis on search results; for instance: how often is ‘p’ used in Matthew, Mark, Luke and John, respectively?⁵¹
- [49] One of the major problems in the marking of the information is that the search unit is the verse, not the variation unit or variant reading.⁵² The verse numbering of the New Testament may have been a useful innovation in the sixteenth century, but its predominant presence in Bible software is rapidly becoming a impediment for serious study of the text.

Space

- [50] The apparatus of NA²⁷ is notoriously difficult to learn. One of the main reasons for this difficulty is that so much information is crammed into limited space. Some simple space-saving characteristics are the following:
- abbreviations of Greek words in the apparatus are not written in full;
 - the text that is adopted is not repeated in the apparatus;
 - in variant readings concerning transpositions, instances of 3 1 2 etc. have not been replaced by the actual Greek words;
 - manuscript sigla such as D 05 and D 06 etc. are not disambiguated according to the parts of the New Testament they contain.⁵³

NA²⁷-SESB_{app} faithfully reproduces all these aspects, even though space is not a problem in electronic editions (only space on the screen is). It was obviously decided that NA²⁷-SESB should not be allowed to diverge from its printed counterpart.⁵⁴

- [51] Another reason of the lack of user-friendliness of the printed apparatus is its multi-layer aspect, which actually involve more complicated space-saving techniques. Two aspects deserve attention here, to wit the use of ordinary brackets in the apparatus and the existence of so-called ‘consistently cited witnesses of the second order’.
- [52] Often ordinary brackets are used in the apparatus, which indicates that the witness thus cited differs on the one hand from the reading for which it is cited in some minor detail, but on the other hand can still count as attestation for the reading under consideration. Precise information on the witness’s reading – as long as the witness is a Greek manuscript – is then found in Appendix II (‘*Variae lectiones minores*’). Our poor students, as well as we textual critics, grateful though we are for what has been given, have to look at two or even three different places for complete information. On the one hand, it may seem a missed opportunity that the information of Appendix II is not included somehow in NA²⁷-SESB_{app}, preferably directly instead of or added to the bracketed material, or otherwise as a hyperlinked database. On the other hand, one can easily imagine the amount of work and more importantly the conceptual problems related to the implementation of this material.
- [53] ‘Consistently cited witnesses of the second order’ are another source of frequent discussion among textual critics and frustration among students of New Testament Greek and textual history. We try to teach the students a clear method of dealing with this space saver, but they find it far worse than cryptic crosswords and the like, and perhaps even textual critics themselves hardly ever go through all the steps they are supposed to know. One has to do several things: (1) look up which manuscripts actually belong to this category for the part of the New Testament under consideration; (2) determine what type of apparatus (negative or positive) one is dealing with and remember the rules that apply; (3) check whether the manuscript is not cited in another part of the variation unit; (4) verify that the manuscript actually has the text in which the variant occurs; (5) hope that not some kind of error had occurred. An electronic edition could (or even should) be the occasion to do away with this tedious category of witnesses once and for all, but once again, the electronic edition does not diverge from its printed counterpart.

Other limitations/desiderata

- [54] The introduction and especially the appendices have been implemented to a very limited degree. Hopefully a future release includes these as well. For example, the outer margin, with scriptural references (and other references as well) is nearly indis-

pensable, if only for the cross-references in the gospels and the references belonging to the Old Testament quotations.⁵⁵ Despite some technical inconsistencies and lack of transparency as far as the criteria are concerned according to which references are included, the outer margin of NA²⁷, together with Appendix IV ('Loci citati vel allegati'), is a valuable tool, which would greatly benefit from the hypertext and search possibilities concomitant with an electronic edition. I also noticed that many Latin words that occur regularly in the apparatus are not explained.⁵⁶

Display problem

- [55] The typical critical signs used in NA²⁷ (τ □ ∫ etc.) do not show well everywhere in the program: they are for instance replaced by something else in pop-up windows or when search hits are 'shown in context'.⁵⁷ Rubén Gómez points out the simple reason for this behaviour: the appropriate code-points have not yet been assigned in Unicode (and fonts are not yet available with these glyphs). For this reason, the Libronix-ApparatusFont (LbxApparatus.ttf) is included in SESB. One could add to Gómez's observation that some years ago INTF together with TLG filed a proposal to include the text-critical signs in Unicode; the proposal has been accepted and Unicode 4.1 (published 31 March 2005) now includes them in the range 2E00–2E0D.⁵⁸

Copying

- [56] It is almost impossible to copy text from NA²⁷-SESB_{app} (and BHS-SESB_{app} as well) and paste it into a word processing program. The reason is the way the information is coded: the pop-up explanations are actually footnotes, and, what is worse, the sigla themselves are the footnote references. Exporting the text as a txt-file is not an option either, for vital information is lost then, for instance the difference between Ϙ and P, between ⁷⁵ and 75, between Ϟ and m etc. Moreover, the text-critical signs are not marked with the appropriate font (LibronixApparatusFont).

Browsing through search results

- [57] When browsing through large numbers of search results (more than a thousand is not exceptional when searching the apparatus), it should be possible to jump to a specific number, instead of having to click 'Show Next 100 Results ...' a number of times.

Future and relation with other projects

- [58] What is the relation of NA²⁷-SESB with NA²⁸, which is being prepared by the INTF (Münster)?⁵⁹ Is any collaboration with ECM/INTF or IGNTP planned? And what about BHS and BHQ, or other Hebrew Bible projects currently underway? As far as NA²⁸ is concerned, it seems that it is intended to contain the printed edition (in both

paper form and electronic format) as well as full transcriptions of the consistently cited witnesses.⁶⁰ For the electronic format, SESB 1.0 can perhaps be seen as (or actually is?) the pilot project.

- [59] In a more general way, textual criticism is an important challenge for the standard model according to which a consistent distinction is made between the data themselves and their representation in either printed or electronic form. Such a distinction does not lie behind NA²⁷ and BHS, for these two editions are products with a long history during which revisions were made by hand. As a consequence, the SESB implementation model for NA²⁷-SESB_{app} and BHS-SESB_{app} may run the risk of rapidly falling victim to the law of diminishing returns.

Conclusions

- [60] One does not need to have much experience with computers, programming and database encoding to profoundly admire what has been achieved. In past years, when working my way through a variant in the NA apparatus, I regularly wondered how on earth it would ever be possible to present such data in a coherent, logical, simple electronic way. NA²⁷-SESB_{app} is a first answer to that.
- [61] The implementation of a printed product, which has itself evolved over the years and even decades, cannot be straightforward and simple. The printed edition shows many features which are aimed at presenting a maximum of information on a limited number of square inches. Porting these features to an electronic format, if anything, means serious concessions to the logic (the unequivocal nature) of computerised data.
- [62] To name but one aspect: the system of critical signs in NA²⁷ (τ ° etc.) is very useful, but it cannot be implemented in a very precise way. It was developed as a practical means of reference between text and apparatus, not as a result of a theoretical model of text-critical phenomena. The fact that variant types often occur in mixed form is by no means the editors' fault, for it is simply due to the nature of the text-critical evidence.
- [63] NA²⁷-SESB is a promising start. Rarely has a child been more welcome. Things are possible, as shown in this review article, that have never been possible before. Compared to BHS-SESB_{app}, NA²⁷-SESB_{app} is far more sophisticated because of the underlying data model that has been adopted. Critical work with the critical apparatus has been greatly enhanced. One must of course always keep in mind the limitations of the apparatus: it contains what its editors decided to provide.
- [64] In my impression, the implementation also led to some inconsistencies or loose ends in the marking-up of fields and data types, which has made a number of searches

either not possible or very complicated. To name the most important factors of NA²⁷-SESB_{app}:

- the unit by which searching is done is the verse, not the variation unit or the variant reading;
- the *txt* part of a variation unit is marked-up, but not the alternative readings;
- the footnoted information cannot be excluded from the search;
- the text-critical signs themselves cannot be searched for directly;
- the asterisk cannot be searched for (not even by using “*”).

And of NA²⁷-SESB_{txt}:

- the single square brackets in the text part can only be found on word level;
- the ‘later additions’ cannot be excluded from searches.

Furthermore, text and apparatus cannot be searched together.

- [65] Birth and first year have been very happy, but the boy – some way I sense that it is a boy, not a girl – will have to grow up. If other users are not to spend as much time and effort as I did for this review article, further documentation and examples – this is a hendiadys – are very much needed. There is a rather steep learning curve, but those who are willing to explore the many possibilities will be greatly rewarded. After all, (immediate) user-friendliness should not be confused with quality.
- [66] The main question that will have to be answered is whether the electronic edition will be allowed to diverge from its printed counterpart. The other question is how the underlying data structure can be improved and enhanced. My suggestion would be to put a programmer/encoder together with a trained textual critic for some time, with the following working method: the textual critic explains what they would like to be able to search for, however complicated it may be, and the programmer either explains how it can be done – in which case the example is immediately recorded in the manual – or explains why it cannot be done, and if possible and desirable adds the search to the wish-list for a future release. The improvements can be necessary on two distinct levels: the encoding of NA²⁷-SESB and the Libronix search engine itself.⁶¹
- [67] In conclusion, DBG, NBG, Libronix, Logos and above all the editors and programmers are to be congratulated on the release of SESB 1.0; for textual critics of the New Testament, NA²⁷-SESB is a long-cherished wish come true. But before these words are converted into advertising ‘blurb’, let me emphasize that my incessant enthusiasm is coupled with some critical remarks, or better *παράκλησις*: encouragement to keep up the good work.

Appendices

Appendix 1. Fields and data types in NA²⁷-SESB_{app}⁶²

[68] Fields:

Category	Field	Most useful alias(es)	Description
Variant	Auslassungen	Omit	□ ... \ or ° (or □ ¹ etc.)
	Hinzufügungen oder Einfügungen	Additions Insertions Insert Add	⊕ (or ⊕ etc.)
	Ersetzungen	Replace Ran	‘ ... ’ or ⚭ (or ⚭ etc.)
	Umstellungen	Transpose Trans	⚭ ... ⚭ or ⚭ with dot
	Attestation	Papyrus-Handschrift	Papyrus
	Unzial-Handschrift	Uncial	⚭ A B C ... Γ ... 046 ... 303
	Minuskel-Handschrift	Min Miniscule	1 2 ... 2818
	Lektionar-Handschrift	Lect	l 32 ...
	Lateinische Handschrift	Latin	a ... aur ... μ ...
	Frühe Versionen	Versions	co (bo sa etc.) sy arm ...
	Kirchenväter	Fathers Fath	Aug Eus Hier Or ...
Other	Textus	Txt	<i>txt</i>
	Zeichensetzung	Punctuation Punct	[...]
	Nothing	Nothing	‘Text that is purely informational and does not contain an apparatus indicator as such.’
	Voetnoottekst	Footnote	‘Tekst die voorkomt in een voetnoot.’ ⁶³

[69] Footnote: it concerns the text that is given in the information window or in a pop-up window. It is indeed coded as footnotes (this appears when one copies part of the apparatus to a word processing program, provided the option ‘copy with footnotes’ is left on).⁶⁴

[70] Data types:

	KeyLink Target	Searchable
Bible	✓	✓
Bible (LXX) [bible+lxx, BibleLXX]		✓
Nestle-Aland 27th Edition Textual Apparatus [na27capp]	✓	
Page Number [Page]	✓	

Appendix 2. Fields etc. in NA²⁷-SESB_{txt}

[71] Fields:

Name	Most useful alias	Description
Primary Morphological Tag	PrimaryMorph	'The primary morphological tag for a given word.'
Used As	UsedAs	'Instances where a morphological form is being used for a different function than the actual form; eg., Nominative "used as" Vocative.'
Variant	Variant	'Variant morphological form of a word. A variant form implies that the primary or first-listed form for the current word is preferred to the variant.'
Crisis	Crisis	'Morphological form when two words merge together to form a crisis or conjunction.'
Lemma Text	Lemma	'Text that appears in its dictionary form.'
Footnote Text	Footnote	'Text that appears in a footnote.'
Old Testament Quote	OTQuote	'Text from the Old Testament Bible quoted in the New Testament.'
Disputed Passage	DisputedPassage	'Text that is disputed, especially concerning its authenticity or its inclusion in a particular corpus.'
Later Textual Addition	LaterAddition	'Text that is considered to be a later addition to earlier manuscripts.'
Bible Text	Bible	'The actual text of the Bible verses, without introductions, headings, etc.'

[72] Document Levels:

Name	Most useful alias	Description
Bible Book	bible-book	'Traditionally, a book of the Bible, such as Genesis.'
Chapter	bible-chapter	'Bible Chapter.'
Verse	verse	'Bible Verse.'
Sentence	sentence	'A group of words which expresses a complete thought, generally indicated by major-stop punctuation.'

[73] Data Types:

	KeyLink Target	Searchable
Bible	✓	
Greek Morphology (GRAMCORD™) [lls-morph+el, GrMorph, GreekMorphology, GreekMorph]		✓
Nestle-Aland 27th Edition Textual Apparatus [na27capp]		✓

Page Number [Page]

✓

Appendix 3. Fields and types in BHS-SESB_{txt}

[74] Fields:

Name	Most useful alias	Description
Part of Speech	Speech	‘Grammatical part of speech designation for a dictionary or lexicon headword.’
Gloss	Gloss	‘In a dictionary or lexicon, a brief explanation or definition of a word or phrase.’
Lemma Text	Lemma	‘Text that appears in its dictionary form.’
Qere (Read) Text		‘The text of the Hebrew Bible that is to be read when it differs from the text that is written.’
Bible Text	Bible	‘The actual text of the Bible verses, without introductions, headings, etc.’
pos		

[75] Document Levels:

Name	Most useful alias	Description
Bible Book	bible-book	‘Traditionally, a book of the Bible, such as Genesis.’
Chapter	bible-chapter	‘Bible Chapter.’
Verse	verse	‘Bible Verse.’

[76] Data Types:

	KeyLink Target	Searchable
BHS Apparatus Criticus [bhscapp, BHSApparatusCriticus]		✓
Bible (BHS) [bible+bhs, BibleBHS]	✓	
QDF Word Number [qwn]	✓	
SESB Lexeme [qlex]		✓

Appendix 4. Fields and data types in BHS-SESB_{app}

[77] Fields:

Footnote Text	Footnote	‘Text that appears in a footnote.’
---------------	----------	------------------------------------

[78] Data Types:

	KeyLink Target	Searchable
BHS Apparatus Criticus [bhscapp, BHSApparatusCriticus]	✓	✓
Bible		✓
Bible (BHS) [bible+bhs, BibleBHS]	✓	✓
Bible (LXX) [bible+lxx, BibleLXX]		✓
Page Number [Page]	✓	

Appendix 5. The LibronixApparatusFont

- [79] The apparatus font is a Unicode truetype font (LbxApparatus.ttf) (no Opentype features). The typical text-critical signs are put in the Dingbat-range (2700-27BF):

∖ 2713	ƒ 2714	ƒ 2715	∖ 2716	ƒ 2717	ƒ 2718	∖ 2719
⊘ 2741						
ƒ 2750	ƒ 2751		2758	! 2759		
ƒ 2765	ƒ 2766	∖ 2767				
∘ 274D		□ 274F	∴ 275A			

- [80] The font also has manuscript and version sigla in the normal (Latin) range:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
ⱱ	Ⱳ	ⱳ	ⱴ	Ⱶ	ⱶ	ⱷ	ⱸ	ⱹ	ⱺ	ⱻ	ⱼ	ⱽ	Ȿ	Ɀ	Ⲁ	ⲁ	Ⲃ	ⲃ	Ⲅ	ⲅ	Ⲇ	ⲇ	Ⲉ	ⲉ	Ⲇ	
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	
a	b	c	d	e	f	g	h	i	j	k	ℓ	ℓ	ℓ	n	o	p	q	r	s	t	u	v	w	x	y	z
[]	Ä																								
[[]]	Ɀ																								

Appendix 6. Errors found in NA²⁷-SESB

- [81] I did not systematically search for imperfections, but only noted the few problems I came across when looking for other things. There are actually very few errors.

- [82] NA²⁷-SESB_{app}

in general

passim	references to page numbers of the introduction do not work
min. 1	min. 1 ^r is confounded with min. 1 ^e and not treated as min. 2814
min. 4	min. 4 ^{ap} is confounded with min. 4 ^e and not treated as min. 2816

in particular

Mt 1:7-8 ^r	D ^{luc} should be D ^{luc}
Mt 22:35 ^r	rell should be <i>rell</i>

- Mt 9:26 † AY- is treated as maj. A and U (sic), but it is actually Greek text, namely the uncial equivalent of αὐ- or αὐ-
- Acts 13:6 E (in Ελυμας E) is treated as Greek, but it is actually uncial E (08)
- Rom 16:17 † ἡϞ should be ἡ Ϟ
- f*¹³ in the description, 1689' is written instead of 1689
- Ϟ in the description, 'txt' should be in italics

[83] NA²⁷-SESB_{txt}

- 1 Cor 6:3 μήτι γε βιωτικά the first two words are parsed as if they were both μήτι (particle, negative); the third is parsed as if it were γέ (particle, emphatic)⁶⁵

[84] BHS-SESB_{app}

- Hier Psalterium (in the information window) should be Psalterium

[85] Notes

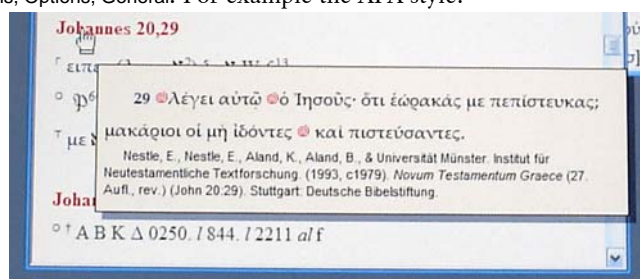
1. In Europe, SESB is sold by the Deutsche Bibelgesellschaft (<http://www.bibelonline.de/de>); in North America by Logos (<http://www.logos.com>).
2. An earlier version of this review was prepared for the official presentation of the SESB at the Vrije Universiteit, Amsterdam, 25 April 2005. At that time three online reviews of SESB were available: Rubén Gómez, ‘*Stuttgart Electronic Study Bible: Welcome to Textual Criticism*’ (<http://www.bsreview.org/sesb.htm> – 2004; consulted 14 April 2005); Sarah Lind, in *TIC Talk* 59 (2004 – <http://www.ubs-translations.org/tictalk/tt59.html>; consulted 14 April 2005); Catherine Conybeare, in *Bryn Mawr Classical Review* (Jan. 2005 – <http://ccat.sas.upenn.edu/bmcr/2005/2005-01-09.html>; with an addition <http://ccat.sas.upenn.edu/bmcr/2005/2005-01-23.html>; consulted 14 April 2005). Since then, the review in *Wisconsin Lutheran Quarterly* 102 (2005) can be found online at <http://www.logos.com/ArticleViewer/664> (consulted 28 April 2005). The short review (in Dutch) by Arian Verheij in *Met Andere Woorden* 24-1 (2005): 37-43 is also available online (<http://www.bijbelgenootschap.nl/sf.mcgi?1614> – consulted 2 May 2005). A review by Christian Riepl (mostly on BHS-SESB) is found in *Jahrbuch für Computerphilologie - online* 6 (2004) (<http://computerphilologie.uni-muenchen.de/jg04/rezensionen/riepl.html> – consulted 10 May 2005). A review by David Kummerow, mostly on SESB-WIVU, is available electronically in *SEE-J – Hiphil Old Testament* 2 (2005) (<http://see-j.net> – consulted 2 June 2005; free subscription needed).

The program, which is available since July 2004, has been tested on a Windows Computer (XP Home SP 2; Pentium 4, 2.4 Ghz; 512 MB). It runs under the Libronix Digital Library System, version 2.1c (since 26 April 2005 version 2.1d, though no list of changes and fixes is known to me).

3. Admittedly Tischendorf’s *Editio critica octava maior*, in Clint Yale’s encoding, is already included in BibleWorks 6 and also published by Logos (as a separate module). I hope to discuss this product at another occasion.
4. NA²⁷ (print) went through a number of printings, with many minor differences especially in the apparatus. Some examples: first printing (1993): Rom 16:7 *txt* Ἰουλιᾶν (app. accordingly); fifth printing (1998): Ἰουλιᾶν (app. accordingly); Rom 16:3-5 ^τ and ^ϐ: until the fifth printing ‘a’ is mentioned (twice); changed to ‘ar’ in the eighth printing (2001); similarly e.g. in Eph 4:28 ^τ; Eph 4:21 ^τ: the variant reading ‘[θεῖα comm]’, still found in the fifth printing, is dropped in the eighth, for no obvious reason. The eighth printing is also updated with several newly found papyri (P⁹⁹⁻¹¹⁶). The addition of 0303 is made silently (cf. NA²⁷ (8): ii (not numbered) and 47*; its attestation is added to six variants in Lk 13:19-25).
5. Unless the space introduced in Mt 1:7-8 ^τ D^{huc} and the one omitted before the first instance of ἦ in Rom 16:17 ^τ counts as such. Some errors in NA²⁷ are of course taken over in NA²⁷-SESB. Perhaps in future printings of NA²⁷ and in the SESB edition, at Lk 5:14 ^τ ἦ can be corrected to the obviously intended ἦ; at Acts 17:19 ^τ, καταγγελομ- should be καταγγελλομ-; at Rev 13:18 ^τ, χι ς and χξς should be χι ϵ ans χξς (stigma instead of final sigma). There is also a slight difference between the information given on min. 1333: at John 7:52 it is mentioned that the *pericope adulterae* is found after Lk 24:53 in 1333^s; at Lk 24:53 itself 1333^c is mentioned. In the text part, the error in Mt 14:27 (ὀ instead of ὁ) is still not corrected.
6. In the ‘Information on the Resource’, NA²⁷ is described as follows: ‘Sometimes referred to as the “critical text” this is the Greek text most widely used today. It is the basis for nearly every modern Bible

translation in the past one hundred years.’ The words ‘the past one hundred years’ are an obvious reference to the Nestle tradition which started in 1898, but it is an overstatement, of course, for there are numerous differences between the ‘old Nestle’ text (up to NA²⁵) and the ‘modern critical text’ (from NA²⁶ and GNT³ onwards).

7. The inverse is not true, for clicking on a text-critical sign in NA²⁷-SESB_{app} brings up the information window.
8. The information window not only contains the corresponding information of the partner database, but also a bibliographical reference. This behaviour seems to be some overkill – screen space is precious and the information is not relevant. The layout of the bibliographical reference itself is governed by the Citation Style set in Tools, Options, General. For example the APA style:



9. As a side-effect of such synchronisation, clicking a text-critical sign in NA²⁷-SESB_{ext} now makes the line with the sign move to the top of its window. The simple reason for this behaviour is that in the apparatus window the variant is by default put at the top when its sign is clicked in the text window; the latter is subsequently synchronised to that position.
10. In the lines of the verses, words can be split after the article, the ἰ copulativum or prepositions such as -ῶ or -ῷ.
11. The introduction is only available with the apparatus, not with the text part (which in turn has the Foreword in both English and German). Moreover, the introduction is not the German original (NA²⁷: 1*-43*), but its English translation (44*-83*). Part IV 76*-79*; ‘Notes in the outer an inner margins’) is omitted, as well as the information in part V on Appendices II-V (81*-83*). Not only German users would like to have the German introduction here as well, and perhaps an effort could even be made to make it available in French, Spanish and Italian (these translations already exist!). Latin or Norwegian, as in older Nestle editions, would seem less important. The references to page numbers, which regularly occur in the introduction, are useless, because the page numbers have been omitted; the references themselves have not been converted into hyperlinks.
12. The information window generally gives information directly taken over from the introduction. In some cases, such as sy^p, this may create some confusion, for the information contains a reference to ‘below (p. 67*)’, which of course only makes sense in the context of the introduction, but not in an separate information window (cf. the information on bo^{pt} and on sy^{ph}). The information on co (taken from page 68*) breaks off at a colon. The information on the critical signs ‘ and ‘ contains a reference to ‘the printed text’, though the text is not ‘printed’ any more, but only ‘published’. The information on *cj* is taken from Appendix V: ‘= *conjecit/conjecerunt*’, but the latter applies to *cjj* only; moreover, the added translation ‘omit(s)’ is not correct; I would suggest ‘proposes’ or ‘guesses’.
13. The explanation of *f*¹ and *f*¹³ is given in a pop-up window.

14. NA²⁷-SESB_{app} is virtually error-free due to the fact that the NA²⁷ apparatus already existed already as an electronic text.
15. In the Libronix system, the wildcard * stands for *zero* or more characters.
16. In ‘About This Resource’ the fields of NA²⁷-SESB_{app} are presented in a somewhat arbitrary order; the reader will find them arranged in categories in Appendix 1 below, together with some explanations. In the following I will use what I consider to be the most useful alias of the field names.
17. There are four basic types of variants, with their typical text-critical signs: variants which involve (1) omission (° or □...`); (2) addition or insertion (⋈); (3) replacement or substitution (⋈ or ⋈...); (4) transposition (⋈...). These categories, of course, presuppose several elements: (1) collation, in which one text functions as the basic text or collation base and the other as the collated text the *differences* of which are recorded; the categories and signs are useful when describing variant readings in a collation or a critical apparatus, but they do not necessarily represent the way the textual changes have come about; (2) delimitation of variation units: decisions on the size of the variant have to be made, and history shows that editors differ widely in their choices.
18. Cf. NA²⁷: 52*, where it is acknowledged that substitutions often involve transpositions. However the scope of the mixing of types is not seen.
19. For instance, at Mt 21:25 °, the variant marked as the omission of τό before Ἰωάννου also contains its substitution with τοῦ in ^f.
20. Sometimes two or more critical signs constitute a single variant reading, e.g. Lk 20:31 □ □ ⋈ (the variant is marked as an omission, but it actually is the substitution of ὁ τρίτος ἔλαβεν αὐτήν, ὡσαύτως δὲ καὶ οἱ ἑπτὰ οὐ κατέλιπον τέκνα with ὁ τρίτος, ὡσαύτως καὶ οἱ ἑπτὰ οὐκ ἀφῆκαν τέκνον). At 1 Pet 3:14 □, a substitution occurs within an omission.
21. It turns out that several of these newly added papyri are never cited in the apparatus (P¹⁰², P¹⁰³, P¹⁰⁴, P¹¹³ and P¹¹⁶), but this is not strange, for it concerns very small fragments.
22. Searching papyrus:46 (instead of papyrus:p46), for instance, finds many instances of P⁴⁵ because of the occurrence of “46” in the *footnote* on P⁴⁵ (to wit in the contents, where Luke 11:28-46 is mentioned). Most instances of P⁴⁵ are *not* found when papyrus:45 is entered; instead, P¹⁰⁴ and P³ are found. I do not understand this behaviour; it probably has to do with the fact that the program only knows words. One can also find all references to P⁴⁶ is to search for papyrus:6238, for this invoice (shelf mark) number occurs in the footnote and is unique to this manuscript. I used this ‘workaround’ before I found the trick with the ‘p’ before the number; it works fine for most papyri. By the way, the trick with the ‘p’ itself is simply based on the fact that a combination such as ‘P66’ is unique, whereas 66 can happen elsewhere as well. The trick also depends on the ‘footnote’ effect, for even when the apparatus contains attestation such as P^{60.66} (as in John 17:22 ⋈), the search for P66 finds the instance of P⁶⁶ because of the ‘footnote’. It is not even clear to me whether the search only finds the footnoted information, or instances of P⁶⁶ (‘P66’) in the apparatus text as well.
23. The search uncial:F includes hits of H, 064, 074, 090, 091, because ‘F’ occurs in their descriptions.
24. The fact that footnote information is inevitably included in the search is the problem here. In abstract terms: when the database contains Ax{Bx}|Ay{Bx} (A and B are field names; x and y are text; | separates units; { indicates level), it is hierarchical, for it contains information on multiple levels; in such cases, there should be a way to find x only at the highest level. As it is now, the search A:x gives both x and y, because it also counts Ay{Bx} as a hit. The search A:x ANDNOT B:x gives nothing, because it also

excludes Ax{Bx}. Otherwise put: I can see no way to exclude Ay{Bx} without naming y.

25. See <http://goodspeed.lib.uchicago.edu/archaicmark/home.html> (consulted 20 April 2005) for online images of min. 2427.
26. f^1 encompasses the minuscules 1, 118, 131, 209 and 1582 (205 and 2193 are also mentioned). f^{13} encompasses 13, 69, 124, 174, 230, 346, 543, 788, 826, 828, 983, 1689 and 1709.
27. The search can be formulated in terms of *field constraints*, but the problem is not solved.
28. The brackets are placed around the punctuation variants as a reminder that punctuation, including punctuation variants, generally belong to the editorial layer of the edition, not to the layer for which direct manuscript attestation can be given. Sometimes punctuation is part of a variant reading, and therefore not put in square brackets in the apparatus, e.g. at Mt 9:29 † ; Mt 11:8 ‡ ; Mt 12:29 † ; Mt 25:15-16 ‡ ; Mt 26:71 † and of course John 1:3 ‡ . Longer readings in the apparatus tend to be provided with some punctuation, e.g. Mt 17:26 ‡ and † ; Mt 20:28 † and of course Lk 6:4 † .
29. E.g. in Matthew: found are Mt 11:7.8; 12:43; 19:4-5; 23:31-32; 26:15.44 (3x); not found are Mt 7:11; 8:7.26; 17:11; 19:8; 21:23; 22:17.44; 23:37; 26:45.49-50; 55; 27:11.
30. One cannot use the word *parallel* (for p), for then the few instances of Ⓢ are found as well.
31. If text-critical information is given on the inscriptions, it is linked to the Greek title of the book by ‘...’ (only Mt-Mk-Lk-Jn-Acts-Eph-Jas-1 Jn-2 Jn-3 Jn-Jude-Rev).
32. In the case of John 7:53-8:11, the sign † is used. At Luke 23:34, the sign ‡ is used. The printed apparatus may be considered slightly inconsistent in its way of dealing with these lateraddition passages; the exact reproduction of these inconsistencies in NA²⁷-SESB_{app}, up to including a nothing field, demonstrates the extent to which the editors of the electronic edition were not willing to diverge from the printed exemplar.
33. Such passages are found at Mark 16:8; 16:9-20; Luke 22:43-44; 23:34; John 7:53-8:11.
34. The phenomenon occurs 29 times in NA²⁷, to wit at Mt 13:40 ([κατα]καίεται); 14:12 (αὐτὸ[ν]); Mk 3:17 (ὀνόμα[τα]); 4:28 (πλήρη[ς]); Lk 4:41 (καρ[αυγ]άζοντα); 11:10 (ἀνοιγ[ήσ]εται); 13:21 ([ἐν]έκρουσεν); 18:30 ([ἀπο]λάβη); 19:29 (βηθανία[ν]); 20:27 ([ἀντι]λέγοντες); Joh 6:23 (πλοιά[ρ]ια); 19:35 (πιστεύ[σ]ητε); 20:31 (πιστεύ[σ]ητε); Acts 1:11 ([ἐμ]βλέποντες); 3:25 ([ἐν]ευλογηθήσονται); 13:14 ([εἰς]ελθόντες); 16:12 (πρώτη[ς]); 19:1 ([κατ]ελθεῖν); 1 Cor 2:4 (πειθοῖ[ς]); 4:14 (νοθετῶ[ν]); 2 Cor 12:15 (ἀγαπῶ[ν]); Heb 3:6 (ἐάν[περ]); 8:6 (νυν[ἵ]); 2 Pet 2:6 (ἀσεβέ[σ]ιν); Rev 2:25 (ἄχρη[ς]); 3:18 (κολλ[ο]ύριον); 13:1 (ὀνόμα[τα]); 16:6 ([δ]έδωκας); 17:3 (γέμον[τα]).
35. Cf. Reidar Aasgaard, ‘Brothers in Brackets? A Plea for Rethinking the Use of [] in NA/UBS’, in *JSNT* 26 (2004): 301-321.
36. The most valuable source of information on the text-critical decisions behind the modern critical text is Metzger’s *Textual Commentary*, which is also available electronically from Logos. At the Logos website (<http://www.logos.com> – consulted 17 April 2005), it is said that it ‘makes a great companion’ to SESB. This may be true in general, but it should be held in mind that the *Textual Commentary* is a companion volume to GNT⁴, not primarily to NA²⁷. Only a small portion of the variants in NA²⁷ are actually discussed by Metzger.
37. According to the introduction, double brackets ‘indicate that the enclosed words ... are known not to be part of the original text’ (NA²⁷: 50*). They are however put in the text for their importance in the history of the church. As it concerns longer passages such as Mark 16:9-20 (as well as the shorter ending found in some manuscripts) and John 7:53-8:11 (the *pericope adulterae*), one can also surmise a typographical

reason: the passages themselves are accompanied by a text-critical apparatus; putting them in the text prevents the adoption of a two-level apparatus, such as found in N¹³⁻²⁵ at John 7:53-8:11 (but not in Mark 16).

38. `txt:uncial:A` is actually a short way of writing `txt:A ANDEQUALS uncial:A` (and as the ANDEQUALS operator is commutative, one can also write `uncial:txt:A`).
39. With the proviso that the search is performed by verse, not by variant or even better by reading. Therefore, when *f*¹ happens to be mentioned elsewhere in the verse with the ‘deflection’, the case is not found. For instance, deflection of 69 from *f*³ is found – using this method (`min:69 ANDNOT “f 13”`) – at Mk 1:13 †; Lk 19:25 □; 20:16 †; 22:39 °; Jn 5:7 †; 5:40 †; 6:70 †; 11:40 °¹, but *not* found are Lk 19:26 †; 19:29 †; 19:38 †; 19:40 †; Jn 4:5 †; 6:11 †; 9:8 †; 9:31 †. In variants with a ‘positive apparatus’, such as Lk 19:38 †; 19:40 †; Jn 9:8 †; 9:31 †, the scope should indeed be as small as ‘reading’, for in such cases *f*³ is mentioned as attestation for a reading other than the one for which 69 is indicated. By the way, the concentration of deflections in the final chapters of Luke is remarkable.
40. This is actually inconsistent with the rest of the marking-up. There are some undesirable consequences. Compare `min:69` and `txt:min:69`: the former finds all instances of *f*³ (of which 69 is part), for instance Mt 1:6 †, where *f*³ is part of the *txt* attestation, but the latter only finds Lk 19:40 † (and the instances in the epistles).
41. The *Range* option in *Advanced Search* only accepts Bible Text, which the apparatus obviously is not.
42. This example is given by Rubén Gómez.
43. Matthäus – Markus – Lukas – Johannes – Apostelgeschichte – Römer – 1. Korinther – 2. Korinther – Galater – Epheser – Philipper – Kolosser – 1. Thessalonicher – 2. Thessalonicher – 1. Timotheus – 2. Timotheus – Titus – Philemon – Hebräer – Jakobus – 1. Petrus – 2. Petrus – 1. Johannes – 2. Johannes – 3. Johannes – Judas – Offenbarung. Often shorter forms can be used, such as “Apostel”, but surprises may occur when these shorter forms happen to be found in footnotes as well.
44. Equivalent and even more sophisticated is `transpose:case(“/[ap]”)`.
45. The result contains eight instances: Mt 25:33; 26:53; Lk 7:42; 19:11; 23:55; Jn 6:70; 13:8; Rev 13:15. It did not find Lk 6:5, which concerns a transposed verse in D and where *post* is written in full. Such lack of consistency in the apparatus is widespread in BHS, but occurs in NA²⁷ as well.
46. The search does not find C³, D^s or N^{vid}, but it does find C* (as C), *κ*¹ (as *κ*) etc. More sophisticated is therefore `omit:uncial:“[:L:]([[:Nd:]]s|vid)”`, though for some reason beyond my comprehension attestation such as C³ is still not found.
47. Regrettably `uncial:κ before 3+ word uncial:B` (at least 3 words between *κ* and B) does not give the desired results, for the search is done by verse. For that reason, instances such as Mk 1:8 are found, in which *κ* is found in the first variation unit (†) and B in the second (°), though in the first *κ* is actually accompanied by B. The search (`uncial:κ before 3+ word uncial:B`) ANDNOT (`uncial:κ before 2 word uncial:B`) gives no results.
48. As the search unit is the verse, instances of a two-way split are also found, when *pm* occurs once again in another variation unit (e.g. Mt 19:24 † and †¹). Three-way split occurs at Mt 16:28 †; Mk 1:16 †; 3:11 †; 4:32 †; 10:39 †; Jn 7:53 †. Unclear – to me – is what is intended at Mt 26:71 †. Using similar methods, one can now easily find the verses in which † † etc. goes to †³ (to wit Lk 8:29; Jn 7:39; Rev 5:6; 12:10; 18:2.16). Examples such as these may come in handy in the classroom (also Gal 4:6 and Rev 19:17 □² and Rev 2:13 °³).

49. Browsing through the list, I noticed the small inconsistency that at Luke 24:12 [□] the dagger † is put after ‘*vs*’, and before it at Luke 24:40 [□].
50. Among some other things, the search finds Lk 19:38 [†] (*txt* (ἐρχόμενος, ὁ βασιλεύς) only supported by B (in earlier printings of NA²⁷, also lat is mentioned)); Rev 2:25 [†] (*txt* supported by \mathfrak{M}); Rev 12:10 ^{†2} (*txt* (κατήγω) only supported by A).
51. The answer seems to be 131/138/248/1.
52. Actually the search unit is not always the single verse. Sometimes, in order to account for text-critical phenomena which extend over traditional verse boundaries, the apparatus combines two or more verses. This occurs for instance at Mt 1:7-8; 4:21-22; 5:4-5; 12:15-16; 15:18-19.35-36; 16:2-3; 17:12-13; 19:4-5; 21:29-31; 22:2-3; 23:31-32; 25:15-16; 26:1-2.49-50; Mk 1:1-3.42-43; 2:15-16.27-28; 3:7-8.18-19; 5:4-5; 6:49-50; 7:8-9.21-22; 10:11-12.35-37; 12:21-22; Lk 1:63-64; 2:4-5; 3:23-31; 4:5-12; 5:5-6.10-11; 6:17-18; 7:24-25; 9:55-56; 10:41-42; 11:35-36.53-54; 12:8-9; 16:22-23; 19:32-34; 22:17-20.26-27.43-44; 23:10-12.42-43; John 7:21-22.37-38; 9:4-5.38-39; 10:26-27; 11:11-12; 13:33-34; 15:3-4; 17:15-16; 18:13-24; 20:3-4.5-6; Acts 2:43-44; 2:47-3:1; 6:10-11; 11:25-26; 13:30-31; 15:17-18; 19:1-2; 21:18-19; 22:6-7; 23:34-45; Rom 16:3-5; 1 Cor 14:34-35; 15:54-55; 2 Cor 1:6-7; 5:19-20; 10:12-13; Eph 5:20-21; Phil 1:16-17; 1 John 5:7-8; Jud 22-23; Rev 1:1-2; 9:2-3.12-13 (cf. the omitted verses at Mt 23:13-14; Mk 7:15-16; 9:43-44.45-46; 15:28; Acts 8:36-37; 15:33-34). Somewhat peculiar is John 17:15-16. At John 18:13-24 two systems exist alongside each other. This may also seem the case at Mark 2:15-16, Acts 23:34-35 and Rom 16:3-5, but the critical signs at the latter place show that it is not intended as such. At John 1:40-42, my third printing (1995) still combines these verses; in the eighth printing and also in NA²⁷-SESB_{app}, the information is split.
53. There is even an obvious error with two minuscules: 1^r (2814) is treated as if it were 1^{cap} and 4^{ap} (2816) is treated as if it were 4^e. For 1^r, see Rev 1:5 ^{o1}; 1:7 [†]; 2:3 [†]; 2:15 [†]; 3:8 [†]; 5:9 [†]; 6:15 [□]; 7:10 [†]; 8:9 [†]; 9:6 [†]; 9:18 ^o; 10:2 [†]; 10:8 [†]; 10:9 [†]; 11:6 ^{o1}; 11:8 [†]; 11:15 [†]; 11:18 [†]; 12:1 ^o; 12:10 ^o; 12:12 [†]; 13:15 [†] and ^{r1}; 13:16 [†]; 14:5 [†]; 14:8 [†]; 16:1 [†]; 16:12 ^o; 16:18 [†]; 18:3 [†]; 18:4 [†]; 18:7 [□]; 18:9 [†]; 18:11 [†]; 19:9 ^o; 20:10 [□]; 21:3 [†]; 21:4 [†] and [†]; 21:6 [†]; 21:9 [†]; 22:2 ^{r2}; for 4^{ap}, see Jas 1:12 [†] (the only occurrence; 4^e itself is only mentioned at Mt 26:31 [†]; 26:53 [†] and Lk 11:3 [†]). On the other hand 2^{ap} (2815) is handled correctly at 1 Thes 2:8 [†]; 2 Tim 3:6 [†]; Heb 12:20 [†]. Similarly, 7^p is found at Rom 16:22 [†].
- There is a trick to find only the instances of min. 1 outside the Gospels: one can exclude “f 1” from the search by entering min:1 ANDNOT “f 1”. For some reason, the space between “f” and “1” is essential.
54. It should be noted however that, besides the verse indications for each verse (in German), also the titles ‘The Shorter Ending of Mark’ and ‘The Longer Ending of Mark’ have been introduced.
55. The other, more ‘exegetical’ cross-references are highly inconsistent and of very limited value.
56. E.g. ‘*sine acc.*’; ‘*ter*’.
57. What actually appears depends on the Unicode font that is used, for Unicode fonts tend to put different placeholder signs in character ranges that are not covered. The font can actually be set in the menu Tools, Options, Bible Tools. The best choice is Palatino Linotype. If the font is set to the LibronixApparatusFont itself, the text-critical signs show, but for some reason the Greek text itself is not displayed correctly, for instance:

<p>14 μετὰ ταῦτα ἐρίσκει αὐτῶν ὁ Ἰησοῦς ἐν τῷ ἐραζῶν εἰπὼν αὐτῶν Ἴδε ὑμεῖς γέγονα μηκέτι ἀμάρτωε ἱνα μὴ κερῶσσί τι γένηται</p>

58. See the entry ‘New Testament Sigla’ at <http://www.tlg.uci.edu/~tlg/Uni.prop.html> (consulted 14 April 2005) and <http://www.unicode.org/versions/Unicode4.1.0> (consulted 14 April 2005). The inclusion of these signs in important Unicode fonts and in Libronix products is hopefully only a matter of time.
59. Cf. the information on the INTF website (<http://www.uni-muenster.de/NTTextforschung/Projekte.html> – consulted 22 April 2005).
60. Cf. the pilot projects of INTF (<http://nestleland.uni-muenster.de> and <http://nttranscripts.uni-muenster.de> – consulted 22 April 2005) and the description on the INTF site (<http://www.uni-muenster.de/NTTextforschung/Projekte.html> – consulted 22 April 2005).
61. As an example of the latter, accounting for the hierarchical nature of the field marking may be mentioned.
62. Information derived from the menu choice *About This Resource* in the Help menu.
63. When information is put together from various layers of the program, one sometimes comes across such instances of mixed languages. When the user language was set to Dutch, part of the Information was in German, another part in English, and some smaller parts in Dutch.
64. There is no reference system, but just footnotes: one would even get the impression that for every instance of every siglum, the footnote is repeated physically in the file, but this can hardly be true; although it could explain the relatively large size of the database file NA27CAPP.lbxlls (33.182 kB!), this size is probably due to the extensive and complicated indexes required by the lbxlls format (introduced with Libronix DLS 2.0).
65. Probably the morphology of GNT⁴, which reads μήτιγε βιωτικά, was adapted to be used for NA²⁷, which reads μήτι γε βιωτικά. The underlying data in NA²⁷-SESB_{ext} makes clear what went wrong (comments added by me after //):
- ```
 // el: Greek
 // TN: ‘particle, negative’
 μήτι γε // the actual text (two words!)

 // the space between the words
 // the referenced text (the wrong word)
 //TM: ‘particle, emphatic’
 βιωτικά


```