Special Morphological Tagging Requirements for Individual Greek Manuscripts Accordance Scholar's Session Rex A. Koivisto, ThD Multnomah Bible College, Portland, Oregon. Monday, November 20, 2006

In doing morphological tagging of specific Greek manuscripts (as opposed to the tagging modern edited editions), several unique issues arise that are not normally a concern when doing morphological tagging. It is the purpose of this brief paper to address some of those unique characterestics as I have encountered them while morphologically tagging two Greek MSS in the past two years, Codices Bezae and Vaticanus, for OakTree Software's *Accordance* for Macintosh.

It is important to clarify exactly what goal is of electronic representation of an ancient manuscript as a module for Accordance software. The goal is not primarily to visually represent the MS *as it exists*, but to but visually *approximate it.*¹The focus, then is not so much as to "look like" the MS but to "be like" the MS. The real power of Greek MSS in the Accordance collection is that they are morphologically tagged. They can by this means be evaluated and searched according to lexical grammatical information, and can quickly compared to other MSS in the collection. The primary goal for an electronically tagged ancient MS, then, is morphological searchability and comparison. The secondary goal is approximate visual representation through imitating column width and line length and writing style.

Exemplars. There were two criteria used to determine when I develop a MS for electronic searching: (1) the existence of a transcription of the MS, and (2) the availability of quality photographic images of the MS. The former serves as a "base text" to work from, and typically provides an educated decision by an early scholar working with the MS as to his view on word separation, and often provides modern versification for easier reference. This enables a much more time-efficient preparation of the electronic form than otherwise would have been the case. For Bezae, we used the standard transcription of F. H. Scrivener, *Bezae Codex Cantabrigiensis* (Cambridge, 1864).² For Vaticanus, Tischendorf's transcription served as base: Constantine Tischendorf, *Novum Testamentum Vaticanum* (Leipzig, 1867).³ Neither of these is flawless, and on a number of occasions comparison of the transcription with the photographic image indicated that the transcription for purposes of electronic

¹ The fluidity of Greek letters (is height and width) in the hands of a Greek scribe when he is attempting to get his lines to be the same length is particularly difficult to reproduce electronically. So, when a scribe has worked his magic of compression and extension, he can get a nice "fit." Electronic Greek fonts, even those as beautiful as the Sylvanus uncial font, are much more uniform. So line *lengths* will not be as similar.

² A reprint of this is still available through Wipf and Stock publishers. But be sure to get the "Pickwick" version; the alternate version they produced has several duplicated and several missing leaves.

³ A photocopy reprint of this is still available through Good Books of Springfield, IL.

preparation.

Uncial Greek Font Issues. Obviously, using a standardized font will only "approximate" what is found in a given manuscript, since each scribe has his unique penmanship style. Further, scribes tended to extend and compress and shrink their words to fit into their desired column-width requirements. Nevertheless, having a standardized uncial Greek font enables an easier visual comparision between manuscripts than otherwise would be possible. In Accordance, this is accomplished through the creation of our own unique uncial font, which OakTree calls *Sylvanus* font. For example: Consider Luke 1:55b-57a, as it appears in Vaticanus.

KALTWENE MATTAYFY NEILCHAPIAMCYNAY тнастреренеетон опестреренеетон опестреренеетон опестреренеетон опестреренеетон OXIONOCTOYTEKE YTHN KRIGTENNH

Now, as it appears in Sylvanus font with continuous script:

ΡΑCΗΜϢΝΤϢΑΒΡΑΑΜ
ΚΑΙΤϢΟΠΕΡΜΑΤΙΑΥΤΟΥ
ΕΙΟΤΟΝΑΙϢΝΑ ΕΜΕΙ
ΝΕΝΔΕΜΑΡΙΑΜΟΥΝΑΥ
ΤΗϢΟΜΗΝΑΟΤΡΙΟΚΑΙ
ϔΠΕΟΤΡΕΨΕΝΕΙΟΤΟΝ **5** ΟΙΚΟΝΑΥΤΗΟ ΤΗΔΕ
ΕΑΕΙΟΑΒΕΤΕΠΑΗΟΘΗ
ΟΧΡΟΝΟΟΤΟΥΤΕΚΕΙ
ΑΥΤΗΝΚΑΙΕΓΕΝΝΗΟΕ

The same, with word break option (non-continuous script) added:

ΡΑC ΗΜϢΝ ΤϢ ΑΒΡΑΑΜ
ΚΑΙ ΤϢ ΟΠΕΡΜΑΤΙ ΑΥΤΟΥ
ΕΙΟ ΤΟΝ ΑΙϢΝΑ ΕΜΕΙ
ΝΕΝ ΔΕ ΜΑΡΙΑΜ ΟΥΝ ΑΥ
ΤΗ ϢΟ ΜΗΝΑΟ ΤΡΙΟ ΚΑΙ
ΥΠΕΟΤΡΕΨΕΝ ΕΙΟ ΤΟΝ **5** ΟΙΚΟΝ ΑΥΤΗΟ ΤΗ ΔΕ
ΕΛΕΙΟΑΒΕΤ ΕΠΑΗΟΘΗ
Ο ΧΡΟΝΟΟ ΤΟΥ ΤΕΚΕΙ
ΑΥΤΗΝ ΚΑΙ ΕΓΕΝΝΗΟΕ

The same, with modern versification added:

ΡΑC ΗΜϢΝ ΤϢ ΑΒΡΑΑΜ
ΚΑΙ ΤϢ ΟΠΕΡΜΑΤΙ ΑΥΤΟΥ
ΕΙΟ ΤΟΝ ΑΙϢΝΑ <u>56</u> ΕΜΕΙ
ΝΕΝ ΔΕ ΜΑΡΙΑΜ ΟΥΝ ΑΥ
ΤΗ ϢΟ ΜΗΝΑΟ ΤΡΙΟ ΚΑΙ
ΥΠΕΟΤΡΕΨΕΝ ΕΙΟ ΤΟΝ **S** ΟΙΚΟΝ ΑΥΤΗΟ <u>57</u> ΤΗ ΔΕ
ΕΛΕΙΟΑΒΕΤ ΕΠΛΗΟΘΗ
Ο ΧΡΟΝΟΟ ΤΟΥ ΤΕΚΕΙ
ΑΥΤΗΝ ΚΑΙ ΕΓΕΝΝΗΟΕ

Ligatures. Dealing with specific manuscripts also introduces new phenomena for electronic representation, such as the presence of combined letters (or ligatures). These include, among others, the line-ending NU overstrike $(\kappa \bar{\iota} //\Delta \gamma N \in \gamma \in I)^4$, the KAI ligature (K), and the MOU ligature (K). These are all represented as symbols in the Sylvanus character set. The KAI ligature can be found as a representative of the word KAI and also of the line-ending syllable KAI, such as is found in diKAIosunh in James 2:23b-24a:

⁴ The nu-overstrike is similar to the moveable-nu added at the end of a word with certain words that end with a vowel when there is a word with a vowel that follows without intervening punctuation. By contrast, the nu-overstrike is used at the end of any line when there would be a nu there (final or medial) that is dispensed with due to space requirements. Instead of the nu, a line (or overstrike) is placed over the previous letter.



Corrector insertions. The reading of MSS are complicated by the presence of other involvement beyond the original hand. These other "hands" often correct grammar, add or erase words or phrases, add diacritics, etc. They also complicate the appearance of the MS. Representing all of these strands can complicate the electronic form of the MS. Therefore the decision was made to follow the original hand as much as possible for the display and morphological tagging. Here is an example of some dittography that was erased by a subsequent hand in 1Cor 13:6-7. Since it was part of the original hand prior to the erasure, it is retained in GNT-VAT, even though it looks to be a clear case of dittography (to me as it did to the corrector).⁵



Word breaks. In uncial MSS, the custom is to use continuous script, or writing continuously without word breaks. Seeing the MSS with this form helps to detect ambiguous readings, such as when word breaks may be placed in different locations. The option is available in Accordance 7.1 and beyond to display the text as continuous text or with words separated out.

But there also exists the common scribal practice of breaking up words at any point when they reached the end of a line, continuing the word onto the next line. This creates special challenges for morphological tagging. If both word portions are tagged with the same lemma and parsing, then computer calculations of that form and/or lemma are doubled. Therefore it was decided to place lemma and parsing information on the line which has the *longest portion* of the word (by letter count) or on the *first portion* of the word (if it is evenly divided). The remainder simply reads thus when selected: "(fragment of word)" as the tagging information. Consider Acts 18:8-9 in Vaticanus, where six

⁵There are some instances, mostly in Bezae, where there are letters or words squeezed into the text. When I was not sure if this was the original hand doing a "self-correct" I included the squeezed in text, but indicated that it was squeezed in by placing the added text within parentheses.

ΚΡΕΙΟΠΟΟ ΔΕ ΔΡΧΙΟΥΝ ΔΓϢΓΟΟ ΕΠΙΟΤΕΥΟΕΝ ΤϢ ΚϢ ΟΥΝ ΟΔϢ ΤϢ ΟΙΚϢ ΔΥ ΤΟΥ ΚΑΙ ΠΟΔΔΟΙ ΤϢΝ ΚΟ ΡΙΝΘΙϢΝ ΔΚΟΥΟΝΤΈΟ Ε ΠΙΟΤΕΎΟΝ ΚΑΙ ΕΒΔΠΤΙ ΖΟΝΤΟ <u>9</u> ΕΙΠΈΝ ΔΕ Ο ΚΌ ΕΝ ΝΥΚΤΙ ΔΙ ΟΡΔΜΔΤΟΟ ΤϢ ΠΔΥΔϢ ΜΗ ΦΟΒΟΥ ΔΔ ΔΔ ΔΔΔΕΙ ΚΔΙ ΜΗ ΟΙϢΠΗ

Κρίσπος	NOUN masculine singular nominative	Crispus
δέ	CONJUNCTION coordinating	but, and, now
ἀρχισυνάγωγος (ἄρχω, σύν, ἄγω)	NOUN masculine singular nominative	ruler of the synagogue
x		(fragment of word)
πιστεύω (πείθω)	VERB third singular aorist active indicative	to believe
ò	ARTICLE masculine singular dative	the, who, which
κύριος-2	NOUN masculine singular dative sacrum	(n) lord, master, the Lord
σύν	PREPOSITION dative	(+dat) with, besides
<u>ὄλος</u>	ADJECTIVE masculine singular dative	whole, all
ò	ARTICLE masculine singular dative	the, who, which
οἶκος	NOUN masculine singular dative	house
χ		(fragment of word)
αὐτός	PRONOUN personal third masculine singular	he, she, it; self, same; they (when pl)
καί	genitive CONJUNCTION coordinating	and, also, even, and yet, but
πολύς	ADJECTIVE masculine plural nominative	much, many
ò	ARTICLE masculine plural genitive	the, who, which
χ		(fragment of word)
Κορίνθιος	ADJECTIVE masculine plural genitive properName	Corinthian
ἀκούω	VERB present active participle masculine plural nominative	to hear, to heed, to obey
χ		(fragment of word)
πιστεύω (πείθω)	VERB third plural imperfect active indicative	to believe
καί	CONJUNCTION coordinating	and, also, even, and yet, but
βαπτίζω (βάπτω)	VERB third plural imperfect middle indicative	to baptize, wash, dip
χ		(fragment of word)
	Κρίσπος δέ ἀρχισυνάγωγος (ἄρχω, σύν, ἄγω) χ πιστεύω (πείθω) ὁ κύριος-2 σύν ὅλος ὁ οἶκος χ αὐτός καί πολύς ὁ χ Κορίνθιος ἀκούω χ πιστεύω (πείθω) καί βαπτίζω (βάπτω) χ	ΚρίσποςNOUN masculine singular nominative properNameδέCONJUNCTION coordinatingἀρχισυνάγωγοςNOUN masculine singular nominative(ἄρχω, σύν, ἄγω)χχπιστεύω (πείθω)νVERB third singular aorist active indicativeὁARTICLE masculine singular dativeκύριος—2NOUN masculine singular dative sacrumσύνPREPOSITION dativeὅλοςADJECTIVE masculine singular dativeὁARTICLE masculine singular dativeἱκοςNOUN masculine singular dative◊AΛύτόςPRONOUN personal third masculine singular genitiveχCONJUNCTION coordinatingπολύςADJECTIVE masculine plural genitive◊XχχΚορίνθιοςADJECTIVE masculine plural genitiveἀκούωVERB progent active participle masculine plural nominativeχχχχπιστεύω (πείθω)VERB third plural imperfect active indicativeχχχKαίματτίζω (βάπτω)VERB third plural imperfect middle indicativeχKαίχKerB third plural imperfect middle indicative

Column and Page Breaks. Each MS gives its page presentation a different look, which presents interesting challenges for electronic representation. Bezae is a Greek/Latin MS with Greek in one column on one page with the Latin on facing pages. Vaticanus is a purely Greek MS of three narrower columns per page. Each MS has its own peculiar presentation. It was decided not to attempt to give exact visual representation of the page layout for a morph-tagged ancient MS (remember: we only

"approximate" the appearance of the MS). But awareness of column and page breaks are just as important to understanding scribal variations as are word breaks. Therefore they needed to be represented in the electronic form in some way. It was decided, therefore to represent column breaks by a continuous single dashed line across the screen (followed by a χ) to separate columns. A continuous double dashed line across the screen indicates a full page break. Below is an example of a column end in Vaticanus, from John 1:22-23, and below it how I have chosen to represent this column break electronically



ΤΟΙΟ ΠΕΜΎλΟΙΝ ΗΜΆΟ ΤΙ ΛΕΓΕΙΟ ΠΕΡΙ ΟΕΛΥΤΟΥ ΕΦΕΙ ΕΓϢ ΦϢΝΗ ΒΟ ΤΟΟ ΕΝ ΤΗ ΕΡΗΜϢ ΕΥΘΥ ------Χ

ΝΑΤЄ ΤΗΝ ΟΔΟΝ ΚΎ ΚΑ Θως είπεν ηςαΐας ο προ

The text below the column break indicator is the text that is found at the top of the next column.

An example of a *page* break may be seen from this sample in Bezae from Matthew 2:3-4. The first is an image of the actual text of Bezae at the end of a page. The second is the electronic representation by the double dashed line.



ΑΚΟΥCAC ΔΕ Ο ΒΑCIΛΕΥC ΗΡϢΔΗC ΕΤΑΡΑΧΘΗ ΚΑ(Ι) ΪΕΡΟCΟΛΥΜΑ ΜΕΤ ΑΥΤΟΥ ΚΑΙ CYNAΓAΓϢΝ ΠΑΝΤΑC ΤΟΥC ΑΡΧΙΕΡΕΙC ΚΑΙ ΓΡΑΜΜΑΤΕΙC ΤΟΥ ΑΑΟΥ ΕΠΥΝΘΑΝΕΤΟ

Another issue is the fact that Bezae has missing leaves. When a leaf is missing, this is indicated by two sets of double lines. For example the leaf containing Matthew 3:7b-16a is missing from Bezae. That missing leaf is presented this way:

Ι: ΪΔϢΝ ΔΕ ΠΟλλΟΥΟ ΤϢΝ ΦΑΡΙΟΔΙϢΝ ΚΑΙ ΟΔΔΔΟΥΚΑΙϢΝ ΕΡΧΟΜΕΝΟΥΟ ΕΠΙ ΤΟ ΒΑΠΤΙΟΜΑ ΑΥΤΟΥ ΕΙΠΕΝ ΑΥΤΟΙΟ ΓΕΝΝΗΜΑΤΑ ΕΧΙΔΝϢΝ ΤΙΟ ΥΠΕΔΕΙΣΕΝ ΥΜΕΙΝ ΦΥΓΕΙΝ

... ΚΑΤΑΒΑΙΝΟΝΤΑ ΕΚ ΤΟΥ ΟΥΡΑΝΟΥ WCEI ΠΕΡΙCTEPAN ΚΑΙ ΕΡΧΟΜΕΝΟΝ ΕΙC ΑΥΤΟΝ

The double set of double-dashed lines indicates TWO page breaks, or a missing leaf.

Versification. The attempt was made to place verse markers at the same location they are found in modern Bibles to aid in computer-aided comparison. On occasion, it was not possible to place the verse number at the exact spot due to the overlap of lines. In such instances, a mark was placed into the text to indicate where the verse number belongs. Ancient reference systems, where possible, were indicated at the start of a line where they are found.

ΜΟΝΙΖΟΜΈΝϢΝ <u>34</u> ΚΑΙ Ι ΔΟΥ ΠΑCΑ Η ΠΟΛΙΟ ΕΞΗΑ ΘΕΝ ΕΙΟ ΫΠΑΝΤΗΟΙΝ ΤϢ ΙΎ ΚΑΙ ΪΔΟΝΤΕΟ ΑΥΤΌ ΠΑΡΕΚΑΛΕΟΑΝ ΪΝΑ ΜΕ ΤΑΒΗ ΑΠΟ ΤϢΝ ΟΡΙϢΝ <u>ΜΑΘΘΑΙΟΝ 91</u> ΝΔ ΑΥΤϢΝ : ΚΑΙ ΕΜΒΑΟ ΕΙΟ ΠΑΟΙΟΝ ΔΙΕΠΕΡΑΟΕΝ Κ ΗΑΘΕΝ ΕΙΟ ΤΗΝ ΪΔΙΑΝ ΠΟΛΙΝ <u>2</u> ΚΑΙ ΪΔΟΥ ΠΡΟΟ ΕΦΕΡΟΝ ΑΥΤϢ ΠΑΡΑΑΥ

In the above example, the modern reference to Matthew 8:34 is located where it is found today. However, the reference to 9:1 is placed one word prior to where it begins in modern Bibles. The : colon mark is to indicate where the chapter actually begins in modern texts. The ancient referencing system $\mathbb{N} \mathbb{A}$ (for "54") is placed at the beginning of that line as it is in the Vaticanus MS.⁶

Spelling errors. No conscious attempt was made to "correct" the original scribe's spelling or grammar. But this leads to some interesting challenges for tagging: Do you tag what they wrote or what they "heard"? There are often clear spelling errors in the text. These spelling errors are most often errors of hearing, since $\alpha 1$ and ε sound alike, $\varepsilon 1$ and ι sound alike, etc. When these occur, alternate taggings should be employed. The first tagging set will be for the "ad sensum" tag, that is, what the word likely represents in the lector's *exemplar*. The form "as written" is also tagged where possible (if it actually is an existing form). In this case, the first tagging is what fits context and is most likely spoken by the lector; the second tagging is what was written by the scribe. Consider Matthew 2:8 in Codex Bezae:

ΚΑΙ ΠΕΜΎΑς ΑΥΤΟΥς ΕΙς ΒΕΘΛΕΕΜ' ΕΙΠΕΝ ΑΥΤΟΙς ΠΟΡΕΥΘΕΝΤΈς ΕΣΕΤΑCΑΤΑΙ ΑΚΡΕΙΒώς ΠΕΡΙ ΤΟΥ ΠΑΙΔΙΟΥ· ΟΤΑΝ ΔΕ ΕΥΡΗΤΕ ΕΠΑΓΓΕΙΑΑΤΑΙ ΜΟΙ ΟΠώς καρώ ελθών προςκγνήςω αγτώ

This describes a set of instructions given to the Magi by Herod the Great regarding the search for the Christ child in Bethlehem. $\mathbf{E} \ge \mathbf{E} \top \lambda \mathbf{C} \lambda \top \lambda \mathbf{I}$ and $\mathbf{E} \top \lambda \mathbf{\Gamma} \mathbf{E} \mathbf{I} \lambda \lambda \top \lambda \mathbf{I}$ are written, however, instead of the imperative forms $\mathbf{\dot{e}} \ge \mathbf{t} \mathbf{\dot{\alpha}} \mathbf{\sigma} \mathbf{\alpha} \mathbf{\tau} \varepsilon$ and $\mathbf{\dot{\alpha}} \pi \alpha \gamma \gamma \mathbf{\varepsilon} \mathbf{i} \lambda \alpha \mathbf{\tau} \varepsilon$. But these are clearly "hearing errors", since the context requires two imperatives given to

⁶ Actually, it is at the beginning of that line but outside the margin. In Accordance, we have placed it for now at the beginning of the line.

the Magi, and the diphthong $\alpha \iota$ and the letter ε sounded the same in Koine Greek.⁷ So, in terms of morph-tagging, both the forms *heard* (imperatives, contextually) and the form *written* (middle indicatives) are given in the tagging.⁸ The latter is given as the second tagging, as a variant.

€≩€ΤλCλΤλΙ	ἐξετάζω (ἐκ, ἐτάζω)	VERB second plural aorist active imperative	to scrutinize
-	ἐξετάζω (ἐκ, ἐτάζω)	VERB third singular aorist middle indicative	to scrutinize

Comparing Manuscripts. With Accordance 7.1 and beyond, comparing MSS becomes a very quick and easy proposition. Two MSS can be displayed side by side. Two MSS can be compared by *lemma*, by *word*, or by *tagging* differences. Here is an example in Acts 12:5-6 in which Codex Vaticanus (left pane) is compared with the Nestle-Aland text by this feature:

ΝΟ<u></u>Ο ΜΕΤΆ ΤΟ ΠΆCXΆ <u>ΔΝΆ</u> ΓΆΓΕΙΝ ΆΥΤΟΝ ΤϢ ΆλϢ Ο ΜΕΝ ΟΥΝ ΠΕΤΡΟΟ <u>ΕΤΗ</u> ΡΕΙΤΟ ΕΝ ΤΗ ΦΥΆΔΚΗ ΠΡΟΟΕΥΧΗ ΔΕ ΗΝ ΕΚΤΕ Ν<u>Ϣ</u>C ΓΕΙΝΟΜΕΝΗ ΫΠΟ ΤΗΟ ΕΚΚΆΗΟΙΑΟ ΠΕΡΙ ΆΥΤΟΥ ΟΤΕ ΔΕ ΗΜΕΆΔΕΝ ΠΡΟCΆ ΓΆΓΕΙΝ ΆΥΤΟΝ Ο ΗΡϢΔΗΟ τῆ φυλακῆ[.] προσευχὴ δὲ ἦν ἐκτενῶς γινομένη ὑπὸ τῆς ἐκκλησίας <u>πρὸς τὸν</u> <u>θεὸν</u> περὶ αὐτοῦ. <u>Πράξεις 12:6</u> ¶ Ότε δὲ ἤμελλεν προαγαγεῖν αὐτὸν ὁ Ἡρώδης, τῆ νυκτὶ ἐκείνῃ ἦν ὁ Πέτρος κοιμώμενος μεταξὺ δύο στρατιωτῶν δεδεμένος ἀλύσεσιν δυσὶν φύλακές τε πρὸ τῆς θύρας ἐτήρουν τὴν φυλακήν. <u>Πράξεις 12:7</u> καὶ ἰδοὺ ἄγγελος κυρίου

This is a "lemma" comparison. The underline indicates lemmas in one that are not found in the other. The strike through indicates variant lemmas at the same location. The vertical line indicates that the compared version has something inserted at this point. For example, we note two elements at this point: 1. The phrase found in the Nestle text in Acts 12:5 as $\pi \rho \delta \varsigma \tau \delta \nu \theta \epsilon \delta \nu$ is not found in Codex Vaticanus. 2. The infinitive $\pi \rho \sigma \alpha \gamma \alpha \gamma \epsilon i \nu$ (to lead before) in Acts 12:6 in the Nestle text has the variant lemma $\pi \rho \sigma \sigma \alpha \gamma \alpha \gamma \epsilon i \nu$ (to lead toward).

Another example would be to compare Nestle with Bezae at Acts 19:9.

Πράξεις 19.9 ώς δέ τινες έσκληρύνοντο καὶ ἀπείθουν κακολογοῦντες τὴν ὁδὸν ἐνώπιον τοῦ πλήθους ἀποστὰς ἀπ᾿ αὐτῶν ἀφώρισεν τοὺς μαθητὰς καθ᾽ ἡμέραν διαλεγόμενος ἐν τῇ σχολῇ Τυράννου Πράξεις 19.10 τοῦτο δὲ ἐγένετο ἐπὶ ἔτῃ δύο, ὥστε πάντας τοὺς κατοικοῦντας τὴν Ἀσίαν ἀκοῦσαι τὸν λόγον τοῦ κυρίου, Ἰουδαίους τε καὶ ἕλληνας. ΣΙΝΈς ΜΕΝ ΟΥ Ν ΆΥΤωΝ ΕΚΚΑΗΡΥ ΝΟΝΤΟ ΚΑΙ ΗΠΙΘΟΎΝ ΚΑΚΟΛΟΓΟΎΝΤΕς ΤΗΝ ΟΔΟΝ ΕΝώΠΙΟΝ ΤΟΥ ΠΑΗΘΟΎς <u>Τών εθηώ</u> <u>Τότε</u> απόςτας <u>ο παύαος</u> απ αύτων αφωρίζεη τους μαθητάς το καθημέραν διάλεγομένος εν τη σχολή τύραννου <u>τίνος από ωράς ει εώς δεκάτης</u>

The insertion of several phrases, including the specific timeframe of Paul's daily teaching in the Hall of Tyrannus, are readily apparent by the underlining. The strike-throughs

⁷ Similarly the diphthong ει and the vowel ι sounded alike, ending in variant spellings of κρίνω as κρείνω, and similar variations.

⁸ In Bezae, this is often easily confirmed by looking at the facing page with the Latin text, which in this instance has the 2plural imperative form in Latin.

show variant lemma phrases. One last sample will serve, that is a comparison of two MSS, Vaticanus (left) with Beza (right) at Acts 20:1

<u>Πραξείς 20·1</u> μετά δε το παγέλεθαι	<u>ΠΡλΣΙC 20·1</u> μετλ δε το πλγελεθλί τον θοργβον
τον θοργβον μετλπεμ	ΠΡΟΟΚΑΛΘΟΛΜΕΝΟΟ ΠΑΥΛΟΟ ΤΟΥΟ ΜΑΘΗΤΑΟ
ψλΜΕΝΟΟ Ο ΠΑΥΛΟΟ ΤΟΥΟ	κλι πλρλκλλε сλс
μλθητής και παρακάλε	ΑΠΟCΠΥCYWENOC Ε ΣΗΥΘΕΝ ΕΙC ΜΥΚΕΎΟΝΙΥΝ
C _{λC} λΠΟCΠλCλMENOC €≩Ηλ	<u>2</u> ΔΙΕλΘϢΝ ΔΕ ΠΛΝΤΆ ΤΑ ΜΕΡΗ ΕΚΕΙΝΗ
ΘΕΝ ΠΟΡΕΥΕΟΘΑΙ ΕΙΟ ΜΑ	κλι χρης – ς λητοής λογώ πολλώ
ΚΔ ΚΕΔΟΝΙΑΝ	Ηλθέν εις την ευυγαγ

Here it becomes readily apparent that Vaticanus has $\mu\epsilon\tau\alpha\pi\epsilon\mu\psi\dot{\alpha}\mu\epsilon\nuo\zeta$ obefore Paul's name; while Bezae has $\pi\rho\sigma\kappa\alpha\lambda\epsilon\sigma\dot{\alpha}\mu\epsilon\nuo\zeta$, but no article. Also, Vaticanus has $\pi\rho\rho\epsilon\dot{\nu}\epsilon\sigma\theta\alpha\iota$ between $\epsilon\xi\eta\lambda\theta\epsilon\nu$ and Makeδονίαν.

These examples show the great usefulness the "compare" feature is for examining the manuscripts that are specifically morphologically tagged, and thereby making textual criticism workable at a new and interesting level. But when there are complex differences, this can be rather overwhelming to assess. To alleviate this, Accordance 7.1 adds the ability to list the specific word differences between word MSS. For example, Acts 19:1ff have so many differences between the two MSS that just looking at the colorcoded differences can be a bit much. But select the "show differences" feature and Accordance lists the specific differences, like this:

	GNT-VAT	GNT-BEZ
Acts 19:1	κ̈́γ εγενετο εν τω τον απολλω ειναι εν κοριν θω παυλον διελθοντα τα ανωτερικα μερη ελθεΐ	Θελοντοσ του παυλου κατα την ϊδιαν βουλ ην πορευεσθαι
	εφεσον	ίεροσ ολυμα ειπεν αυτω το πνα ύποστρεφειν εισ την ασιά διελθων δε τα ανωτερικα μερη ερχεται εισ εφ εσον
	ευρειν	ευρων
Acts 19:2	τε πνευ μα πιστευ σαντεσ ουδ ει πνευμα ανιδ εστιν	 πνα πιστευσαντεσ ουδε πνα αγιον λαμβανουσί, τινεσ
Acts 19:3	ει πεν τε εβα πτισθητε ειπαν	ειπεν δε εβαπ τισθητε ελεγον
Acts 19:4	 μετανοιασ λε γων ερχομενὃ πιστευ σωσιν τον χ̂ν	ο μετανο ιασ λεγων ερχομενον πιστευσωσιν χρν
Acts 19:5	ល់	τουτο ΐῆῦ χ͡ρῦ εισ αφεσιν αμαρτιων

A few final words. When one attempts to represent an ancient Greek MS today, it becomes all too easy, based on one's own familiarity with modern critical editions of the Greek NT, to expect *what you are looking at* to be *what you are familiar with*. However, what you expect to be there is not always there! Thus, in attempting to produce a "modern electronic form" of the text for sophisticated computer users of the 21st century, I too found myself subject to the same sorts of intrusive "scribal errors" as the scribes of old experienced! So, weak and bleary-eyed reader that I am, I have undoubtedly introduced many "modernisms" into the text of these MSS that will as yet need to be discovered and purged. In going back over Bezae in preparation of Vaticanus, I caught dozens of these mistakes. And so Vaticanus will remain a work in progress. As it stands it offers much for lemma and morphological analysis of the MS. But it will undoubtedly be improved in subsequent editions (as Bezae already has). And this will be greatly improved by the feedback of our careful users. As always, the final court of appeals is the MS itself. That is what I have attempted to represent, and that is what will correct me where I am wrong.