

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

|                               |   |                     |
|-------------------------------|---|---------------------|
| ABBOTT DIABETES CARE INC. and | ) |                     |
| ABBOTT DIABETES CARE LIMITED, | ) |                     |
|                               | ) |                     |
| Plaintiffs,                   | ) |                     |
|                               | ) |                     |
| v.                            | ) | C.A. No. 23-239-KAJ |
|                               | ) |                     |
| DEXCOM, INC.,                 | ) |                     |
|                               | ) |                     |
| Defendant.                    | ) |                     |
| <hr/>                         |   |                     |
| DEXCOM, INC.,                 | ) |                     |
|                               | ) |                     |
| Counter-Plaintiff,            | ) |                     |
| v.                            | ) |                     |
|                               | ) |                     |
| ABBOTT DIABETES CARE INC. and | ) |                     |
| ABBOTT DIABETES CARE SALES    | ) |                     |
| CORP.,                        | ) |                     |
|                               | ) |                     |
| Counter-Defendants.           | ) |                     |

**DEXCOM INC.'S OPENING CLAIM CONSTRUCTION BRIEF**

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| 81         | Patent Owner's Notice of Appeal, Case No. IPR 2022-00909, Paper 39 (Jan. 3, 2024)                   |

**TABLE OF ABBREVIATIONS**

| <b>Abbreviation</b> | <b>Description</b>                                             |
|---------------------|----------------------------------------------------------------|
| Abbott              | Abbott Diabetes Care Inc. and Abbott Diabetes Care Sales Corp. |
| DexCom              | DexCom Inc.                                                    |
| '591 Patent         | U.S. Patent No. 11,202,591                                     |
| '335 Patent         | U.S. Patent No. 11,266,335                                     |
| '056 Patent         | U.S. Patent No. 11,298,056                                     |
| '528 Patent         | U.S. Patent No. 9,119,528                                      |
| '541 Patent         | U.S. Patent No. 9,801,541                                      |
| '364 Patent         | U.S. Patent No. 10,709,364                                     |
| '031 Patent         | U.S. Patent No. 11,002,031                                     |
| '204 Patent         | U.S. Patent No. 11,213,204                                     |
| '625 Patent         | U.S. Patent No. 11,510,625                                     |
| POSITA              | Person of ordinary skill in the art                            |

## **I. INTRODUCTION**

The Court should adopt DexCom’s proposed constructions, which are consistent with the plain and ordinary meaning of the disputed claim terms in light of the intrinsic and extrinsic evidence. For many terms, no construction is necessary because the claim language is straightforward and readily understood.

## **II. BACKGROUND OF THE PATENTED INVENTIONS**

### **A. The ’528 Patent**

The ’528 Patent relates to the use of an improved combination of two hypoglycemic indicators to alert patients to actual and potential hypoglycemia. The first indicator is provided if a glucose value goes below a threshold that can be set by a user. The second indicator is provided if a predicted glucose value is predicted to go below a threshold that cannot be set or modified by a user. The hypoglycemic indicators comprise a flag that has instructions associated with it (*e.g.*, instructions to take or not take insulin).

### **B. The ’541 and ’204 Patents**

The ’541 Patent and ’204 Patent share a specification<sup>1</sup> and claim methods and systems for remotely monitoring health characteristics of a patient. Ex. 6 (’541 Patent) at Abstract, 4:25-34. These health characteristics may include an analyte concentration in the patient’s blood stream (*e.g.*, glucose levels), or bodily functions such as heart rate, blood pressure, temperature, etc. *Id.* These characteristics (and other information about the state of the patient) “can be gathered using a host monitoring system that incorporates a computing device, such as a smart phone, and one or more sensors, such [as] a continuous glucose sensor, heart-rate monitor, GPS device, etc.” *Id.* at 4:35-38. This information “can then be transmitted to one or more remote monitors used by

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<sup>1</sup> The ’204 Patent is a continuation of the ’541 Patent. Ex. 9 (’204 Patent) at cover. For convenience, all citations to the specification herein are to the ’541 Patent.

caretakers” such as a parent, nurse, or doctor. *Id.* at 4:41-50; 6:3-4. In this way, a remote caretaker—for instance, the parent of a young child suffering from diabetes—can receive notifications about the child’s glucose levels and provide the appropriate care. *Id.* at 5:35-41.

### **C. The ’364 Patent**

The ’364 Patent discloses improvements in the calibration of glucose sensors. For example, some embodiments calibrate data from a glucose sensor using *in vitro* sensitivity measurements, and *in vivo* sensitivity derived therefrom based on a predictive relationship between the two. Ex. 7 (’364 Patent) at 17:37-18:36. Other embodiments use sensor codes to encode calibration information, providing for improved ease of use. *Id.* at 68:46-59.

### **D. The ’031 Patent**

The ’031 Patent relates to improved continuous glucose monitoring systems configured to account for expected sensitivity changes associated with the length of time that the glucose sensor has been inserted within the patient’s body to improve calibration. *See, e.g.*, Ex. 8 (’031 Patent) at 210:39-59. The ’031 Patent teaches that, for a given sensor or batch of sensors, the expected sensitivity changes can be determined based on “a priori information.” *See, e.g., id.* 9:22-26, 140:35-54; 147:12-15. The “a priori information” can include, among other things, a “profile” associated with a drift in sensitivity, where the profile can be based on, e.g., changes in sensitivity values observed during sensor manufacture. *See, e.g., id.* at 213:5-215:66.

### **E. The ’625 Patent**

The ’625 Patent relates to improved CGM products that are designed to enhance precision in the application of a sensor assembly patch onto the skin of a user by preventing undesirable movement and rotation of components relative to one another during insertion. *See, e.g.*, Ex. 10 (’625 Patent) at Abstract. The patent describes a needle hub configured with an “anti-rotation feature,” where the anti-rotation feature has a shape that fits with a complementary opening in an

on-skin sensor assembly. *See, e.g., id.* at 11:10-37. The anti-rotation feature prevents rotation of the needle hub with respect to the on-skin sensor assembly during insertion. *Id.*

### III. LEGAL STANDARDS

Claim terms are given “their ordinary and customary meanings, according to the customary understanding of an artisan of ordinary skill at the time of the invention.” *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1328 (Fed. Cir. 2008). “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). Although courts may look to extrinsic evidence including dictionaries, treatises, and expert testimony, intrinsic evidence—the claim language, patent specification, and prosecution history—is the primary source of guidance as to the meaning of the claims. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-83 (Fed. Cir. 1996).

A claim is not indefinite if the claim, “viewed in light of the specification and prosecution history, inform[s] those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). “[A]bsolute precision is unattainable,” and therefore “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Id.* (internal quotation marks omitted).

### IV. DISPUTED TERMS FOR THE ’528 PATENT<sup>2</sup>

The ’528 Patent is the parent of the ’215 Patent asserted in the -605 Action. *See* U.S. Patent 10,702,215 at p. 2 (“Related U.S. Application Data”); *id.* at 1:10-26. The ’528 Patent and ’215

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<sup>2</sup> Abbott also proposed for construction two groups of phrases that appear in claims 9, 21-22, 32, and 44-45, and which Abbott contended are indefinite. D.I. 107-1 at 9. DexCom is no longer asserting claims 9, 21-22, 32, and 44-45 and, therefore, does not brief those phrases.

Patent have the same inventors and share the same specification, except that the '215 Patent (later in time) lists additional priority references in a section titled "Incorporation By Reference To Related Applications." '215 Patent at 1:10-26.

The phrases at issue here were previously briefed in the -605 Action, and the resolution of those issues should be controlling here. "Where multiple patents 'derive from the same parent application and share many common terms, [Courts] must interpret the claims consistently across all asserted patents.'" *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1316 (Fed. Cir. 2015); *see Cloud Farm Assocs. LP v. Volkswagen Grp. of Am., Inc.*, 674 F. App'x 1000, 1006 (Fed. Cir. 2017) ("The same term should be construed consistently throughout the same patent and any related patents sharing a common specification.").

**A. "evaluating a dynamic risk of the predicted glucose value" (claims 5 and 28)**

| <b>DexCom's Proposed Construction</b> | <b>Abbott's Proposed Construction</b>                                                                                         |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Plain and ordinary meaning            | "evaluating a dynamic risk of the predicted glucose value by inputting the predicted glucose value into a dynamic risk model" |

The phrase "evaluating a dynamic risk of the predicted glucose value" would have been readily understood by a POSITA and does not require construction. "Dynamic" is a common word that indicates constant or continuous change. *E.g.*, Ex. 80 (American Heritage Dictionary) at 558; Ex. 78 (New Oxford American Dictionary) at 542. "Risk" is another common word, which indicates a possibility or probability of harm, loss, danger, or that something unpleasant will happen. *E.g.*, Ex. 80 (American Heritage Dictionary) at 1514; Ex. 78 (New Oxford American Dictionary) at 1507. In short, the disputed phrase is straightforward and comprised of commonly understood words.

Abbott improperly attempts to import the phrase "dynamic risk *model*" into the claims. In the -605 Action, the parties briefed this term in the context of the '215 Patent. Abbott argued its

improperly narrow construction was supported by prosecution disclaimer, pointing to DexCom’s statement in the IPR concerning the ’215 Patent that “[t]he specification . . . confirms the ‘predicted value[]’ is an ‘input’ to a ‘dynamic risk model.’” C.A. 22-605, D.I. 681 at 15. But there was no such disclaimer. DexCom did not argue that “evaluating a dynamic risk” requires a “dynamic risk model,” and the PTAB did not distinguish prior art on that ground. DexCom merely discussed an example in the specification that uses predicted glucose as an input to a dynamic risk *analysis* in that example. And it did not rely on a “model” limitation to distinguish the prior art. Nor did the PTAB, which made clear that the distinction was that the dynamic risk analysis in Guerra used rate of change as an input, as opposed to predicted glucose value. Ex. 23 at 54-55 (“Patent Owner contends specifically that ‘[t]he Guerra function Petitioner identifies . . . does not take the predicted glucose value as an input, it takes rate of change as an input.’”); *id.* at 55 (“We can find no disclosure . . . of using the predicted glucose value in Guerra.”); *id.* (“Dr. Rodbard’s testimony similarly fails to acknowledge or indicate where Guerra provides any teaching of applying a ‘predicted glucose value’ as an input.”); *id.* at 56 (Dr. Rodbard’s “additional testimony” was “unsupported by sufficient evidence that a person of ordinary skill in the art would have known to determine and use a ‘predictive glucose value’ [sic] as an input rather than the rate of change, as taught by Guerra”).

The decisions Abbott cited in support of its argument in the -605 Action are distinguishable because, in those cases, the patentee clearly said the claims did not cover certain material. *Tech. Props. Ltd. LLC v. Huawei Techs. Co.*, 849 F.3d 1349, 1358 (Fed. Cir. 2017) (district court properly limited “entire oscillator” to require a variable oscillator, where the patentee argued in prosecution that prior art did not anticipate because its “crystal clock rate ‘is at a fixed, not variable, frequency’”); *Saffran v. Johnson & Johnson*, 712 F.3d 549, 559 (Fed. Cir. 2013) (patentee’s

multiple prosecution statements that the “the device used is a sheet rather than a pre formed chamber” was clear and unmistakable disclaimer of devices that were not a sheet). Here, there is no clear and unmistakable statement from DexCom disclaiming all evaluations of dynamic risk except those using a “dynamic risk model.” Because Abbott’s proposed construction is premised solely on a non-existent disclaimer, that construction should be rejected and the claim language should be given its plain and ordinary meaning.

**B. “the hypoglycemic indicator comprises a flag that has a particular set of instructions associated with it depending on ...” (claims 16 and 39)**

| <b>DexCom’s Proposed Construction</b> | <b>Abbott’s Proposed Construction</b>                                                                                                                                                                                                                              |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plain and ordinary meaning            | “the hypoglycemic indicator comprises a flag that has a particular set of instructions output to a person or external device to take an action associated with it depending on ...”; “instructions” in this term does not include internal processing instructions |

The phrase “the hypoglycemic indicator comprises a flag that has a particular set of instructions associated with it depending on . . . .” would have been readily understood by a POSITA and does not require construction. This limitation is straightforward. It requires that the hypoglycemic indicator (part of claim 1’s “output”) includes a flag and that: (1) the flag has a particular set of instructions associated with it; and (2) which set of instructions are associated with the flag depends on whether the indicator was activated based on the first or second function. This is consistent with the claims, specification, and the PTAB proceedings.<sup>3</sup>

Contrary to Abbott’s new overly narrow construction, the claims do not require “a flag that has a particular set of instructions output to a person or external device to take an action . . . .” Indeed, that additional limitation is not found anywhere in the claim language, nor is it required

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<sup>3</sup> Although Abbott advanced a different position in the IPR for this phrase in the ’215 Patent, the parties now agree that “instructions” does not include internal processing instructions.

by anything in the intrinsic record. Rather, the claim language is unambiguous that the instructions only must be “associated with” the flag. Nothing in the claim language requires that the instructions themselves be part of the flag.

The PTAB similarly understood this phrase, as it appeared in claim 12 of the ’215 Patent. Based on the plain language of claim 1 of the ’215 Patent, which recites an output comprising a hypoglycemic indicator, the PTAB concluded that the flag of claim 12 of the ’215 Patent must be part of an output to a user or external device. Ex. 23 at 47-48. According to the plain language of this disputed phrase, the instructions must be associated with that flag. The “instructions” are not merely internal processing instructions. *Id.*

In the -605 Action, Abbott contended its overly narrow construction was supported by prosecution disclaimer from the PTAB proceedings. But to constitute a disclaimer, there must be a disavowal of claim scope that is clear and unmistakable. *3M Innovative Prop. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326-27 (Fed. Cir. 2013). That is not the case here.

Abbott relied on pages 29-30 of DexCom’s Patent Owner Response in the ’215 Patent IPR proceedings. C.A. No. 22-605, D.I. 681 at 19-20. In the IPR, Abbott alleged that claim 12 of the ’215 Patent was met by the DexCom STS, pointing to a disclosure of “processing instructions” to execute the result of outputting an alert. Ex. 24 at 30. In distinguishing that art, DexCom argued, consistent with its position here (and as Abbott now agrees), that processing instructions are insufficient; the instructions must be instructions to a user or external device. *Id.* at 29-30. Nothing in this argument disclaims a method where a flag is output and the flag (through symbols or otherwise) directs or points the user to instructions located elsewhere. Such a method falls within the scope of the claims because the flag is “associated with” a particular set of instructions, as the claim requires.

Abbott focused on the statement that Abbott “fail[ed] to give ‘instructions’ its proper meaning, which is that the flag presents ‘instructions’ to a person or external device as noted above.” *Id.* at 30. As the surrounding context makes clear, this statement concerned the meaning of “instructions”—specifically that “instructions” means instructions to a user or external device, not just internal processing instructions, which was the focus of the dispute in the IPR. Moreover, the statement that “the flag presents ‘instructions’ to a person or external device” does not disclaim embodiments in which the outputted flag refers the user to written instructions in a user manual through symbols or other cross-references. And citing page 47 of the PTAB’s decision, Abbott argued that the PTAB understood DexCom to argue the instructions must themselves be displayed on the device, rather than cross-reference a user manual. C.A. No. 22-605, D.I. 692-1 at 5. But the PTAB’s decision was only focused on whether the instructions could be internal processing instructions (as Abbott then argued), or whether they needed to be external instructions to a user or other device. Nothing indicates DexCom disclaimed implementations where the device outputs a symbol that directs a user to instructions in a user manual. At minimum, the statements that Abbott relies on are “amenable to multiple reasonable interpretations,” and therefore “cannot be deemed clear and unmistakable.” *3M Innovative Properties*, 725 F.3d at 1326.

The decisions Abbott cited in the -605 Action are inapposite because they involved statements that the claim did not cover certain subject matter. *Speyside Med., LLC v. Medtronic Corevalve, LLC*, 2023 WL 4043955, at \*5 (D. Del. June 16, 2023) (“substantially equal to or less than” did not encompass where stent became longer, after patent owner’s counsel said that configuration was “exactly the opposite of what [is] required by the claims”); *Pact XPP Schweiz AG v. Intel Corp.*, 2023 WL 2631503, at \*3 (D. Del. Mar. 24, 2023) (limiting “sequences” to “data sequences” and did not include sequences of instructions where patent owner’s counsel argued

that if one interpreted “sequences” to read on sequences of instructions, it “would essentially read out that term from the phrase” and then used that line to distinguish prior art); *Intel Corp. v. XMTT, Inc.*, 2022 WL 1152312, at \*1 (Fed. Cir. Apr. 19, 2022) (patent owner could not advocate a new claim construction “clearly inconsistent” with its position that was adopted by the PTAB).

Because Abbott has failed to show that there was a clear and unmistakable disclaimer, the claim language should be given its plain and ordinary meaning.

**C. “second function” (all asserted claims)**

| <b>DexCom’s Proposed Construction</b>             | <b>Abbott’s Proposed Construction</b> |
|---------------------------------------------------|---------------------------------------|
| “function that provides a predictive alert/alarm” | Plain and ordinary meaning            |

The Court should adopt DexCom’s construction for three reasons. First, DexCom proposes that “second function” be construed the same here as it was in the license trial for the related ’215 Patent. Second, the patent contains a present invention statement indicating that the invention requires a predictive alarm, which could only come from the second function. Third, the ’528 Patent equates “second function” to “predictive alert” and ubiquitously refers to the “second function” as predictive.

**1. Abbott’s Proposal Is Contrary To The Court’s Prior Jury Instruction.**

During the July 2023 license trial, the jury was instructed that “second function” in the ’215 Patent means “function that provides a predictive alert/alarm.” D.I. 561 at 16. The jury applied that construction in finding that Abbott had a license to claim 1 of the ’215 Patent. DexCom proposes to use the same construction. *See SightSound Techs.*, 809 F.3d at 1316 (“Where multiple patents ‘derive from the same parent application and share many common terms, [Courts] must interpret the claims consistently across all asserted patents.’” ). Abbott, by contrast, asks the Court to find that the jury was incorrectly instructed, calling into question the validity of the verdict. *Contra Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003)

(“It is axiomatic that claims are construed the same way for both invalidity and infringement.”). Having accepted the constructions for the license case and, more importantly, having prevailed on certain of its license defenses under those constructions, the doctrines of judicial estoppel and invited error prevent Abbott from seeking a different construction. *See Haemonetics Corp. v. Fenwal, Inc.*, 746 F. Supp. 2d 314, 316 (D. Mass. 2010) (rejecting different construction of “plurality of tubes” after the parties agreed on the meaning of “plurality” and “tubes” for trial because judicial estoppel prevents a party from asserting a claim that “is inconsistent with a position taken by that litigant . . . in an earlier phase of the same legal proceeding”); *Robinson v. First State Community Action Agency*, 920 F.3d 182, 189 (3d Cir. 2019) (under invited error doctrine, “we have long held that when a party jointly recommends a jury instruction, it cannot later complain about that very instruction”). Should the Court find that the jury was incorrectly instructed as to the interpretation of “second function,” the earlier license adjudication cannot stand.

## **2. The ’528 Patent Is Limited By A Present Invention Statement.**

The Court’s instruction to the jury as to the meaning of “second function” was also correct. Like the ’215 Patent, the ’528 Patent contains a present invention statement: “The present systems and methods relate to processing data from a continuous analyte sensor. More particularly, the present systems and methods relate to providing accurate predictive alarms to a user.” *Compare* Ex. 5 (’528 Patent) at 1:15-17, *with* Ex. 26 (’215 Patent) at 1:31-33. This description of the present invention as a whole limits the scope of the claims by requiring a predictive alert—“[t]he public is entitled to take the patentee at his word and the word was that the invention” is as described in the specification. *Honeywell Int’l, Inc. v. ITT Indus.*, 452 F.3d 1312, 1318-19 (Fed. Cir. 2006); *see also Trading Techs. Inc. v. eSpeed Inc.*, 595 F.3d 1340, 1353 (Fed. Cir. 2010). That the specification refers to the “present systems and methods” rather than the “present invention” is of

no moment.<sup>4</sup> In *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1348 (Fed. Cir. 2004) (emphasis added), the Federal Circuit held that claims were limited by “clear statements in the specification that the invention (‘the present system’) is directed to communications ‘over a standard telephone line,’” particularly when the specification consistently discussed the communications occurring over a standard telephone line. The present facts are indistinguishable. For example, the ’528 Patent expressly equates “predictive alert” to “second function.” See Ex. 5 (’528 Patent) at 36:3-9 (“Inactivation conditions for the real-time alert (first function) and predictive alert (second function) may be the same or different.”). In addition, all of the patent’s examples indicate the “second function” is a predictive function. See Ex. 5 (’528 Patent) at 2:31-35, 2:35-37, 2:52-67, 3:21-30, 3:46-50, 3:50-56, 4:4-14, 4:17-20, 25:61-64, 28:38-44. The current dispute is thus on all fours with *Microsoft*, 357 F.3d at 1348.

Consistent with DexCom’s argument here, the PTAB acknowledged that, in the ’215 Patent, “nowhere in the written description is the second function discussed without reference to ‘prediction’ in some form or manner of a glucose value,” but nevertheless declined to adopt DexCom’s construction. Ex. 23 at 15. DexCom respectfully submits that conclusion was incorrect and notes that DexCom has filed a notice of appeal as to the PTAB’s final written decision. Ex. 81 (Notice of Appeal). In addition to incorrectly holding that the “present system and methods” language should not be treated as limiting, the PTAB relied on claim differentiation involving claims 1 and 5-7. Ex. 23 at 17-21. However, claim differentiation does not apply here because

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<sup>4</sup> The PTAB adopted Abbott’s position that this language was not limiting because it referred to “the present systems and methods,” rather than referring to the “present invention.” See Ex. 21 at 14. Respectfully, that conclusion is directly contrary to controlling Federal Circuit precedent that “present system” has the same effect, as set forth herein.

claim 5 recites “evaluating a dynamic risk of the predicted glucose value,” meaning that claim 5 narrows claim 1 even if “second function” means “function that provides a predictive alert/alarm.” There is no “evaluating a dynamic risk” limitation in claim 1. *See Kraft Foods, Inc. v. Int’l Trading Co.*, 203 F.3d 1362, 1368 (Fed. Cir. 2000) (“[T]hat the claims are presumed to differ in scope does not mean that every limitation must be distinguished from its counterpart in another claim, but only that at least one limitation must differ.”).

Abbott previously analogized these facts to *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1136 (Fed. Cir. 2011). But that case is different. There, the Federal Circuit declined to limit the claims because the specification indicated that the identified features were “optional features of the ‘present invention.’” *Id.* at 1137 (emphasis in original). Here, by contrast, the predictive alert is not optional, the patent equates “second function” to “predictive alert” (36:3-9), and every example of the second function is predictive. Thus, the specification of the ’528 Patent leads to the “inescapable conclusion” that the claimed second function is a function that provides a predictive alert/alarm. *Microsoft*, 357 F.3d at 1348; *see also Sprint Comm. Co. LP v. Charter Comm., Inc.*, C.A. No. 17-1734-RGA, 2019 WL 7037656, \*3 (D. Del. Dec. 20, 2019) (limiting “interworking unit” to an “ATM interworking multiplexer” because the specification “repeatedly and consistently refers to the device that translates communications (i.e., the interworking unit) as an ‘ATM interworking multiplexer’”).

## V. DISPUTED TERMS FOR THE ’541 & ’204 PATENTS

- A. **“wherein the wireless mobile remote monitor or a user of the wireless mobile remote monitor is specifically authorized by the host to receive the alert notification message to augment the receiver monitoring of the analyte state of the host” (’541 Patent, claim 1)**

| DexCom’s Proposed Construction | Abbott’s Proposed Construction |
|--------------------------------|--------------------------------|
| Plain and ordinary meaning     | Indefinite                     |

Abbott asserts that this limitation is indefinite under 35 U.S.C. § 112. Specifically,

DexCom understands from the parties' meet and confer that Abbott contends that use of the term "augment" renders the claim language indefinite. *See* Ex. 77 (Abbott's Prelim. Invalidity Contentions) at 172 ("Nowhere in the specification or prosecution history does the '541 Patent define such a limitation, or explain what is required to 'augment' the receiver monitoring, which is a relative term."). Abbott's position is untenable given the straightforward language of the claims and the specification, and it cannot meet the high burden of proving indefiniteness by clear and convincing evidence.

The plain meaning of this limitation is readily apparent when read in light of the surrounding claim language and the patent's specification. *Phillips*, 415 F.3d at 1313 (claim terms read "not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification"). Conventionally, a patient wearing a CGM sensor, sometimes referred to as a "host," may monitor his or her glucose levels and other data using a receiver. This is illustrated in Fig. 2A below, which shows a receiver 102 that "may include a display 122 to enable the host 199 to present information from continuous analyte sensor 10, delivery pump 2, glucose meter 4, and/or other devices/sensors." Ex. 6 ('541 Patent) at 6:64-67.

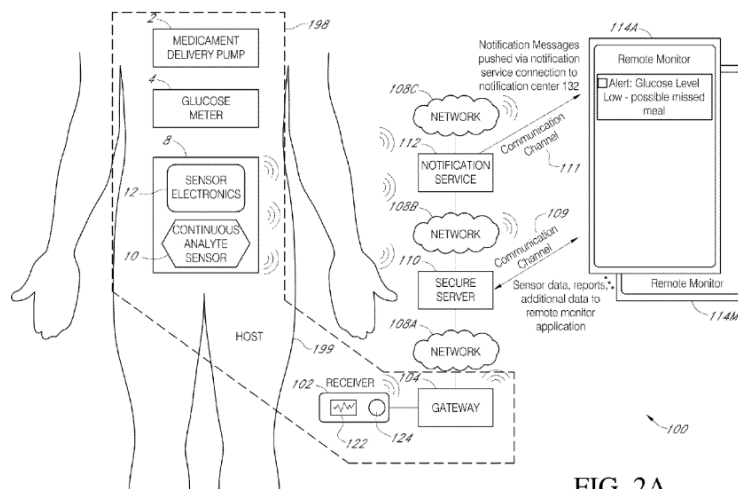


FIG. 2A

The '541 Patent discloses that in addition to the host monitoring his or her own glucose levels, the host's glucose levels may also be remotely monitored. Specifically, claim 1 is directed to a method for *remotely* monitoring an analyte concentration, for example glucose levels, in a patient's blood stream. *See* Ex. 6, Claim 1. The method involves, *inter alia*, receiving and presenting, at a wireless mobile remote monitor, an alert notification message indicative of the analyte concentration of the host patient. *Id.* Claim 1 further requires that the wireless mobile remote monitor (or a user thereof) be authorized by the host to receive the alert notification message, which is used to augment, or add to, the monitoring of the host's analyte state. *Id.*; *see also id.* at 4:25-34, 5:35-42, 7:11-35.

This remote monitoring is useful because it allows “a parent, a care giver, a health care professional, a school nurse, and the like, [to] have remote monitor 114 receive notification messages representative of certain events determined based on sensor data from receiver 102, continuous analyte sensor 10, delivery pump 2, and/or glucose meter 4, and view historical and substantially real-time sensor data.” *Id.* at 7:14-20. These events may include “a measured analyte sensor value above or below a predetermined threshold, a rate of change or a level of glucose measurements above a predetermined threshold, a predicted glucose value approaching (or predicted to approach) a predetermined threshold, a host 199 not responding to a prompt, a message, or an alert displayed at receiver 102,” and so on. *Id.* at 7:21-28. In the example of Fig. 2A, a notification message 132 indicates a low glucose level and the possibility the host has missed a meal. A remote caregiver receiving such an alert “may assist host 199 by providing *an additional layer of monitoring and oversight*, as well as receiver 102, continuous analyte sensor 10, delivery pump 2, glucose meter 4, and the like.” *Id.* at 7:31-35 (emphasis added).

In other words, claim 1's use of an “alert notification message to *augment* the receiver

monitoring of the analyte state of the host” merely means that the remote monitoring is in addition to any monitoring the host is conducting. *See id.* This understanding is consistent with the plain and ordinary meaning of the term “augment,” which generally refers to adding something to what is there before. *See, e.g.,* Ex. 78 (New Oxford American Dictionary) (defining “augment” as “make (something) greater by adding to it”); Ex. 79 (Cambridge Dictionary of American English) (defining “augment” as “to make something larger or fuller by adding something to it”).

The core of Abbott’s complaint is Abbott’s contention that “augment” is a “relative term.” Ex. 77 (Abbott’s Prelim. Invalidity Contentions) at 172. But that is not the case. Consistent with the specification and the plain meaning of the term, the remote monitoring merely “provid[es] an **additional** layer of monitoring and oversight” in addition to the host receiver. Ex. 6 (’541 Patent) at 7:31-35. There is nothing to suggest that the remote monitoring must provide some undefined quanta of additional monitoring before it starts “augmenting” the host monitoring.

Moreover, this conclusion is consistent with other decisions that have construed terms reciting “augment.” For example, one decision held that “augmented reality” refers to “the presentation of virtual objects in a scene alongside of real-world elements.” Claim Construction Order, Dkt. 135, *NantWorks, LLC, et al. v. Niantic, Inc.*, Case No. 20-cv-06262 (N.D. Cal. Sep. 2, 2022). In other words, it only requires that “augmented reality” add “virtual objects” to reality, or “real-world elements.”

As such, the limitation is easily understood in light of the surrounding claim language and the patent specification. It needs no construction and should be given its plain meaning.

**B. “rules” / “settings” / “alert rules” / “alert rules settings” (all asserted claims)**

| <b>DexCom’s Proposed Construction</b> | <b>Abbott’s Proposed Construction</b> |
|---------------------------------------|---------------------------------------|
| Plain and ordinary meaning            | Indefinite                            |

Each of the independent claims of the ’541 and ’204 patents includes one or more claim

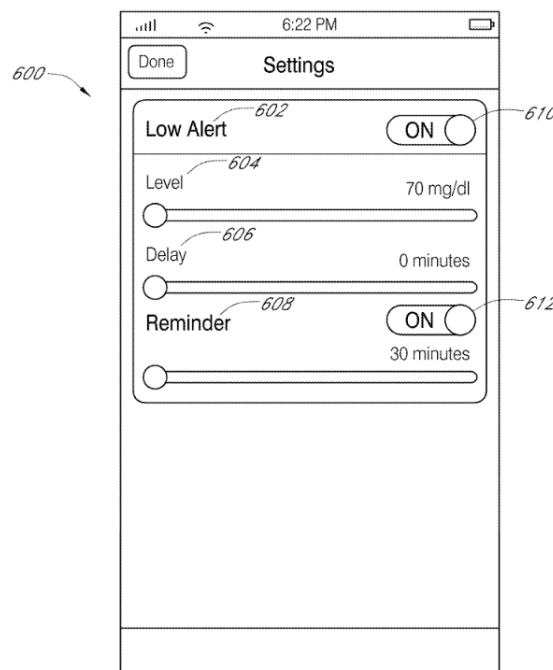
elements directed to rules or settings on a server that is in communication with a remote monitor. For example, claim 16 of the '541 Patent recites that an “event is detected by the server system based on one or more sets of recommended alert rules settings configured by the host using the receiver.” Abbott contends that these “rules” / “settings” terms are indefinite under 35 U.S.C. § 112. Specifically, Abbott argues that the “specification uses ‘rules’ and ‘settings’ without defining either term or making clear how they are distinct from one another, despite clearly insinuating and expressly claiming a distinction.” Ex. 77 (Abbott’s Prelim. Invalidity Contentions) at 172-73. However, the plain meanings of these terms are evident in light of the surrounding claim language and the patent’s specification, and Abbott cannot meet its burden of showing indefiniteness by clear and convincing evidence. *Phillips*, 415 F.3d at 1313.

The claimed inventions facilitate remote monitoring of a patient’s health through, *inter alia*, alert notifications relating to various health characteristics, such as the patient’s glucose levels. Ex. 6 ('541 Patent) at 4:25-34, 5:35-42. The system may include “rules” to define and trigger these alerts. For example, a “rule may define that when a low level of glucose is detected for a certain host, a certain remote monitor should receive a notification message.” *Id.* at 9:36-39. Similarly, “a rule may define that a glucose value below a certain value should not be the subject of a notification message” to a remote monitor “although an alert message may be sent ... to notify the host 199”; another rule “may define that a glucose value between a range of values should be the subject of a notification message”; while another rule may define sending a notification “when a dangerously low glucose value is detected.” *Id.* at 9:60-10:1.

These rules “may be defined during the configuration process by a user, such as host 199, a caregiver, and/or predefined as default rules (which may be reconfigured by a user or may be adapted by the system 100 over time to accommodate the host).” *Id.* at 9:45-49. In other words,

rules may come as predefined recommended defaults and/or may be set at a later time to suit specific patient and caregiver needs. *Id.*; *see also id* at 10:3-7 (“[T]he rules used to trigger alerts to host 199 at receiver 102 may be different from the rules used to send notification messages to remote monitor 114, although one or more of the rules may be the same as well.”).

Rules may have settings associated with them, such as the threshold glucose level at which to trigger a low glucose alert. Further, the specific settings of a given rule may be modified as well. *Id.* at 36:3-12 (in a section titled “Managing Remote Monitor Alert Settings”). This is illustrated in Fig. 13 below, which shows exemplary settings that may be modified for a low glucose alert, such as the glucose level or delay. *See also id.* at 35:31-54.



*See id.* at 41:14-29 (“At block 1630, the user manages alert settings . . . The settings can include setting threshold values for when to trigger an alert to the remote monitor, delays, reminders and no data alert settings, discussed in more detail elsewhere herein.”).

At bottom, there is nothing ambiguous or special in how the words “rules” and “settings”

are used in the specification or claims. They are readily understood in the context of the surrounding claim language and in light of the patent specifications. They should thus be afforded their customary meanings.

**C. “wherein accepting the invitation, programmatically establishes an account associated with the [remote monitor / apparatus] at the secure server” (’204 Patent, claims 7, 19)**

| <b>DexCom’s Proposed Construction</b> | <b>Abbott’s Proposed Construction</b>                                                                                                                                                          |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plain and ordinary meaning            | “wherein accepting the invitation automatically, without user log in or other user intervention, establishes an account associated with the [remote monitor / apparatus] at the secure server” |

Dependent claims 7 and 19 of the ’204 Patent each depend from claims (5 and 17) that are directed to a remote monitor receiving an invitation to access a server and providing an acceptance of the invitation. Claims 7 and 19 add that acceptance of the invitation “programmatically establishes an account associated with the [remote monitor / apparatus] at the secure server.” This limitation is another that is readily understood. The claim language, patent specification, and prosecution history do not accord it any special meaning, and it needs no further construction beyond its plain and ordinary meaning. *Phillips*, 415 F.3d at 1313. Abbott’s proposed construction improperly rewrites “programmatically” as “without user log in or other user intervention” without any basis in the intrinsic record.

As explained above, the ’204 Patent claims inventions for remotely monitoring health characteristics of a patient. *See* Ex. 6 (’541 Patent) at Abstract, 4:25-34, 5:35-42. A host patient can select who may remotely access and receive notifications about their health. *See id.* at 32:49-57, 40:28-42. For instance, a host user may invite remote users to receive notifications about the host’s health. *Id.* at 40:28-42. “[A] user receiving the invitation can either accept or deny the invitation.” *Id.* at 40:61-62. Accepting the invitation may “programmatically direct[] the user via

the user's computing device to download a remote monitoring application," or it may "programmatically [*sic*] trigger[] the user's computing device to automatically access a server carrying the remote monitoring application." *Id.* at 40:66-41:4. "[I]n some implementations, the user ... need not register with secure server 110, as the secure server already has the user's account information from when the invitation was formed" and sent by the host. *Id.* at 41:9-13. In other words, the system may programmatically direct the new user to perform certain steps (*e.g.*, download and install an application) or it may programmatically trigger certain steps automatically (*e.g.*, downloading of application or register new account). Although the claimed invention may follow particular steps (*i.e.*, programmatically), these steps are not necessarily automated.

Abbott's proposed construction impermissibly imports limitations from the specification by mandating that any account creation happen automatically, "without user log in or other user intervention." Such a limitation, however, is unsupported by the claim language or the patent specification. The plain meaning of "programmatically" does not require an automatic occurrence without user involvement.<sup>5</sup> And nowhere does the specification mandate that accounts must be created "without user log in or other user intervention." At most, certain embodiments contemplate that accounts *may* be created automatically upon a user's acceptance of an invitation. *See, e.g.*, 41:9-13, 41:60-65. But these examples are all introduced as only possible embodiments, not mandatory implementations. *Id.* at 41:9 ("Note that in some implementations ...."), 41:65 ("In some implementations..."). And the Federal Circuit has "repeatedly stated that while claims are to be construed in light of the specification, they are not necessarily limited by the specification." *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376, 1384 (Fed. Cir. 1998) (refusing to limit

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<sup>5</sup> *See* Ex. 78 (New Oxford American Dictionary) (defining "programmatic" as "according to a program, schedule, or method"); Ex. 80 (American Heritage Dictionary) (defining "programmatic" as "[f]ollowing an overall plan or schedule").

term “rotating” to method described in preferred embodiment); *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (reversing construction of “datalink” that required a wired connection and excluded wireless connection). Indeed, the specification in this case also contemplates additional user interactions when authenticating new users and devices such as requiring “a user to provide a security credential (e.g., a user identifier, a password, a stored security token, and/or a verification identifier provided by text message, phone, or email) at a user interface presented on a processor, such as receiver 102, remote monitor 114, and/or any other computer.” Ex. 6 at 25:50-67.

The Court should thus reject Abbott’s construction. The limitation is readily understood in the context of the surrounding claim language and in light of the patent specification, and it should be given its plain and ordinary meaning.

## VI. DISPUTED TERMS FOR THE ’364 PATENT

### A. “reference glucose concentration values” (claim 4)

| DexCom’s Proposed Construction | Abbott’s Proposed Construction                                                                                                         |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Plain and ordinary meaning     | “values of glucose concentration, from any source including but not limited to the sensor being calibrated, to be used as a reference” |

The phrase “reference glucose concentration values” in dependent claim 4 of the ’364 is similar to “reference analyte concentration measurement,” a term proposed for construction in C.A. No. 22-605 in connection with U.S. Patent No. 11,000,213, which shares a specification with the ’364 Patent. Like in C.A. No. 22-605, this term would have been readily understood by a person of ordinary skill in the art and should be given its plain and ordinary meaning. Abbott’s proposed construction only serves to shuffle the words of the term around, without resolving any dispute of the parties as to the meaning of the words of the claim, and while introducing potential ambiguity.

### 1. The Meaning Of “Reference Glucose Concentration Values” Is Plain

The meaning of “reference glucose concentration values” is plain when viewed in the broader context of the claim and specification. Claim 4 of the ’364 Patent recites “the processor is configured to calibrate sensor data from the transcutaneous electrochemical glucose sensor using the information associated with in vivo sensitivity of the transcutaneous electrochemical glucose sensor without reliance on reference glucose concentration values obtained after insertion of at least a portion of the transcutaneous electrochemical glucose sensor in a host.” The context of the term is not reference glucose concentration values in some abstract sense, but rather reference glucose concentration values “obtained after insertion . . . of the . . . sensor in [the] host” and for use in “calibrat[ion].” Ex. 7 (’364 Patent) at cl. 4.

The embodiments described in the ’364 Patent, and sensors of the type used by the parties, do not obtain glucose concentration values directly. Instead, the sensors measure current, which can be counted or evaluated in various ways. Ex. 7 (’364 Patent) at 65:60-66:5; *see id.* at 65:48-51. That current correlates to the glucose value. If the correlation is a linear one, the ’364 Patent discloses that, in an embodiment, the sensor signal  $y$  can be defined as equal to  $mx+b$ , where  $m$  is the sensor’s sensitivity to glucose,  $x$  is the glucose concentration, and  $b$  the baseline, and calibration consists of solving that equation to determine  $m$  and  $b$ . *Id.* at 17:45-58.

Some embodiments of the ’364 Patent disclose using such reference glucose concentration values for calibration by way of a “matched pairs” approach. This approach involves matching sensor data to corresponding reference analyte data points. *Id.* at 12:18-24. From that correlation, a regression can be performed to generate a function (a “conversion function”) that converts the sensor output to a glucose value. *Id.* at 78:11-16. This is an example of using reference glucose concentration values obtained after insertion of the sensor in the host as recited in claim 4.

The ’364 Patent contains extensive discussions of calibration approaches, including

approaches that use different types of reference analyte concentration values to correlate the sensor's output to a known analyte concentration for the purpose of calibrating that sensor. The '364 Patent therefore discloses that "[o]ne or more reference values can be used to calibrate the sensor data." Ex. 7 ('364 Patent) at 74:49-50. In some examples, "reference values can be obtained from sensor data of another analyte sensor," but "[r]eference values can also be obtained from a non-continuous monitoring system, such as a self-monitored blood analyte test (e.g., finger stick blood samples) . . . ." *Id.* at 74:50-60. As another option, "reference values can be obtained from in-vitro benchtop sources during a benchtop calibration process," where "reference solutions of analyte may be used for in-vitro calibration where the reference value for the concentration is known from the reference solution preparation." *Id.* at 74:65-75:3. Thus, for example, reference glucose concentration values can be provided by another continuous sensor, a fingerstick test, or by a reference glucose solution of known concentration.

## 2. Abbott's Proposed Construction Does Not Give Meaning To Any Term Being Construed And Should Be Rejected

Abbott's proposed construction in large part merely repeats the words being construed, but in a different order.<sup>6</sup> Importantly, Abbott does not even attempt to provide further gloss on the words "reference," "glucose," "concentration," or "values." Abbott proposes that "reference glucose concentration values" be construed as, in relevant part, "**values of glucose concentration** . . . to be used as a **reference**," thus simply re-using the four words of the claim in a different order than they appear in the claim term. What purported dispute Abbott is intending to resolve with this construction has not been disclosed by Abbott. Abbott identified no dispute in C.A. No. 22-605 either.

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<sup>6</sup> DexCom addresses the additional language Abbott attempts to inject into the claim, "from any source including but not limited to the sensor being calibrated," below.

Courts routinely refuse to adopt constructions like this that amount to nothing more than reshuffling the words of the claim. *See Round Rock Rsch. LLC v. Acer, Inc.*, No. CV 11-1011-RGA, 2013 WL 12315522, at \*3 (D. Del. June 21, 2013) (rejecting proposal because “Plaintiff’s proposed alternate construction reorders the words in the term without providing any clarification”); *NextG Networks, Inc. v. NewPath Networks, LLC*, No. C08-1565 VRW, 2009 WL 1226556, at \*7 (N.D. Cal. May 1, 2009) (refusing to adopt a construction that “merely reorders the words in the claim term”). The Court should do the same here.

Moreover, Abbott’s proposed construction appears to introduce a potential for ambiguity into the claim language. *Barry v. Stryker Corp.*, No. 20-1787-RGA, 2023 WL 1765651, at \*24 (D. Del. Feb. 3, 2023) (rejecting plaintiff’s construction because it “injects ambiguity”). Although the plain language of the claim makes clear that the values described are reference glucose concentrations, Abbott’s proposal severs “reference” from the remainder from the claim language, and requires only that the “values” be used “as a reference,” not as a reference glucose concentration. That is not consistent with the plain language of the claim, and is likewise not consistent with the specification, which makes clear that the patents are speaking of reference glucose concentrations, not in some other, vaguer “reference” sense. *See* Ex. 7 (’364 Patent) at 9:41-44, 84:66-67, 90:16, 90:19-20 (referring to a “reference glucose value” and a “reference glucose measurement”); *id.* at 80:39, 80:54, 85:2-3 (referring to “reference glucose data”).

The term should be given its plain and ordinary meaning.

**3. “from any source including but not limited to the sensor being calibrated”**

Abbott’s construction also introduces these additional words (“from any source including but not limited to the sensor being calibrated”) as padding, but there is no need to do so, and these words too introduce potential ambiguity. First, although in one sense the claimed sensor had been

calibrated at the factory using *in vitro* sensitivity information, the specific claim language in question is speaking of “sensor data” being calibrated, not the sensor itself. *See* Ex. 7 (’364 Patent) at cl. 4 (“processor . . . configured to calibrate sensor ***data***” (emphasis added)). Abbott’s proposed construction is inconsistent with the surrounding claim language, and therefore at minimum imprecise—it should be rejected for that reason. Second, the gloss on the claim language Abbott is seeking to add is unnecessary. Nothing in the plain language of the claim suggests a restriction on source of the reference glucose concentration value, including the sensor recited in the claim, and thus DexCom agrees that the plain and ordinary meaning does not prohibit the source of the measurement being the sensor recited in the claim, whose data is being calibrated. *See* Ex. 7 (’364 Patent) at 74:67-75:3 (discussing use of a “reference solutions of analyte [that] may be used for in-vitro calibration”).

## VII. DISPUTED TERMS FOR THE ’031 PATENT

### A. “drift profile” (claims 23-34)

| DexCom’s Proposed Construction | Abbott’s Proposed Construction                                                      |
|--------------------------------|-------------------------------------------------------------------------------------|
| Plain and ordinary meaning     | “profile of a change in baseline and/or sensitivity of the sensor signal over time” |

Independent claim 23 of the ’031 Patent is directed to a method for monitoring a glucose concentration that includes the step of “determining a glucose concentration value based at least in part on the sensor data and information associated with a ***drift profile***.” Ex. 8 (’031 Patent) at 259:30-50. Dependent claims 24-34 inherit this limitation. *Id.* at 259:51-260:32. Abbott contends that a special meaning should be given to the term “drift” in the phrase “drift profile.” Abbott clings to one example description of “drift” from the specification, and proposes that the Court read that limitation into the claims while ignoring clear direction from the specification that the term is not so limited. DexCom proposes that the term “drift profile” should be afforded its plain and ordinary meaning, echoing exactly what is expressly stated in the ’031 Patent specification.

In the context of the '031 Patent, a “drift profile” is a set of information associated with sensor measurement characteristic changes over time. *See, e.g.*, Ex. 8 ('031 Patent) at 21:36-48. The '031 Patent recognizes that sensitivity of in-vivo measurement devices can shift with time (e.g., based on the length of time that the sensor has been inserted within the patient’s body), and that such changes should be accounted for in computing the output data. A “drift profile” is used to account for such changes. Discussing examples of what “drift” may encompass, the '031 Patent specification expressly states that the term “drift” should be “given [its] ordinary and customary meaning to a person of skill in the art” and is “not to be limited to a special or customized meaning.” *Id.* at 21:36-48. Reinforcing this instruction, the '031 Patent specification describes “drift” (and “drift profile”) in many non-limiting contexts. For example, it describes these terms in broad contexts, such as referring to a change in the sensitivity of the “*sensor*” (without the “signal” qualifier as proposed in Abbott’s construction), and also as referring to a “‘change’ in baseline and/or sensitivity” more generally. *See, e.g., id.* at 21:45-48. With these broad descriptions, the specification confirms that “drift” can correspond to a change in the sensitivity of the “sensor signal” itself, and/or it may correspond to a change in the sensitivity of the “sensor” more generally (i.e., beyond the “signal” itself, such as those associated with hardware, software, materials, etc.). The '031 Patent specification refers to the terms “drift” (and “drift profile”) with other language also, further confirming the non-limiting nature of the claim term. *See, e.g., id.* at 21:41-42 (“ . . . a change in the baseline and/or sensitivity of the sensor signal over time . . .”), 21:43-45 (“ . . . a substantially distinct change over a relatively short time period . . .”); 21:45-46 (“ . . . a substantially gradual change over a relatively longer time period . . .”); 212:22-26 (“ . . . a change (e.g., drift) in sensor sensitivity using the formula . . .”); 213:15-16 (“ . . . amount of sensitivity change/drift over time”).

Despite the range of descriptions noted above, Abbott favors one specific meaning from the specification and proposes reading it into the claims to the exclusion of others. Abbott selects from the sentence quoted above that characterizes “drift” as “a change in the baseline and/or sensitivity of the sensor signal over time.” Ex. 8 (’031 Patent) at 21:41-42. Notably, in the very same paragraph that provides the example language Abbott includes in its proposed construction, the ’031 Patent expressly reiterates that the characterization is provided “without limitation” as to what “drift” (and by extension “drift profile”) can encompass. *Id.* at 21:36-48. Abbott’s proposed construction ignores this caveat and attempts to attach to the phrase “drift profile” a specific meaning not required by the claims nor warranted when considered in context of the specification as a whole. In so doing, Abbott commits “one of the cardinal sins of patent law—reading a limitation from the written description into the claims.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1320 (Fed. Cir. 2005). Nothing in the specification suggests that Abbott’s language selection should be singled out to the exclusion of other language, and no recognized exceptions are applicable to warrant a construction that departs from the plain and ordinary meaning in the context of the ’031 Patent specification. Moreover, nothing in the specification demonstrates that DexCom acted as its own lexicographer to restrict the definition to any particular description of the term, and nothing in the prosecution history reflects a manifest exclusion or restriction representing a clear disavowal of claim scope relative to the plain and ordinary meaning. Because the intrinsic record does not support narrowing the term as Abbott proposes, and instead contemplates that “drift” (and by extension “drift profile”) will encompass the full scope of its ordinary and customary meaning to a person of skill in the art in the context of the patent specification, Abbott’s proposal should be rejected and DexCom’s proposal adopted. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1319-20, 1323 (Fed. Cir. 2005).

For at least these reasons, Abbott’s attempt to improperly attach a special meaning to the term “drift,” and read limitations from the specification into the claims should be rejected. Instead, the phrase “drift profile” should be accorded its plain and ordinary meaning as would be understood by a person of skill in the art in the context of the ’031 Patent specification, as DexCom proposes.

#### VIII. DISPUTED TERMS FOR THE ’625 PATENT

- A. **“wherein the needle hub is coupled to the [insertion element/needle] by heat staking, snap-fit, friction-fit, clamshell[,] or insert molding” (claims 4, 14, 26) and “a locking element configured to couple the [insertion element/needle] to the needle hub by insert molding” (claims 5, 15, 27)**

| <b>DexCom’s Proposed Constructions<br/>(both terms)</b>    | <b>Abbott’s Proposed Constructions<br/>(both terms)</b> |
|------------------------------------------------------------|---------------------------------------------------------|
| Plain and ordinary meaning<br>(afforded patentable weight) | Product-by-process claim element                        |

The independent claims of the ’625 Patent are directed to an applicator and/or needle hub “for applying an on-skin sensor assembly” that includes an “anti-rotation” feature. Ex. 10 (’625 Patent) at 98:32-52, 99:18-38, 100:1-13, 29-54. Dependent claims 4, 14 and 26 further recite that “the needle hub is coupled to the [insertion element/needle] by heat staking, snap-fit, friction-fit, clamshell[,] or insert molding.” And dependent claims 5, 15 and 27 recite “a locking element configured to couple the [insertion element/needle] to the needle hub by insert molding.” *Id.* at 98:57-62, 99:39-44, 100:23-28.

Abbott improperly contends that these phrases should be construed as “product-by-process” claims without any patentable weight, but has no reasonable basis for supporting this position. Although the Federal Circuit has held that when considering the patentability of product claims that contain process limitations, claim scope is generally based on the product itself, not the process, it has also noted that where such limitations connote with equal force a structural characteristic of the product, those limitations are commonly and by default interpreted in their

structural sense. *See In re Nordt Dev. Co., LLC*, 881 F.3d 1371, 1375–76 (Fed. Cir. 2018); *In re Garnero*, 412 F.2d 276, 279 (CCPA 1969) (holding that “interbonded one to another by interfusion” connotes structure to a claimed composite and should therefore be considered in the determination of patentability). Thus, where the alleged process limitation connotes specific structure, it should be given patentable weight and not found to be a “product by process” claim. *See, e.g., First Quality Tissue, LLC v. Irving Consumer Prod. Ltd.*, No. 19-CV-428-RGA, 2020 WL 3542321, at \*4 (D. Del. June 30, 2020) (citing *In re Nordt* and holding that “through air dried tissue” was not a product-by-process limitation despite being “certainly a process” because it also “connotes specific structure”).

The terms at issue here include recitation of a coupling by “heat staking, snap-fit, friction-fit, clamshell[,] or insert molding” (claims 4, 14, 26) or “a locking element” coupling that “couple[s] the [insertion element/needle] to the needle hub by insert molding” (claims 5, 15, 27). Both fit squarely into the category of limitations that connote specific structure, and should not be viewed as product-by-process limitations. Indeed, the claim language itself is talking about the structure of the coupling for the insertion element/needle to the needle hub. The ’625 Patent specification describes the recited “coupl[ings]” as “locking features” designed to enable the two elements—the “needle”/ “insertion element,” on the one hand, and the “needle hub” on the other—to “mate with one another” in a structurally “complimentary” fashion to provide the function of “securing” the two together. *See* Ex. 10 (’625 Patent) at 69:17-32. These structural “locking features” provide a low-profile and small form factor mechanism with a mating relationship between two elements that unquestionably connotes structure. *Id.* The physical relationship of the coupling between these features (e.g., mating) is structural and avoids the need for additional coupling components that would otherwise require more surface area, occupy greater internal

volume, and/or increase displacement in providing the function of securing the two together. Thus, the limitations at issue here provide structural and functional differences to the claimed product as compared to a product without them, including products described in the prior art. Indeed, the prior art lacks any complete disclosure of both the structural and functional features provided by these claim limitations. That is, without the limitations recited in claims 4, 14 and 26, and/or without the limitations recited in claims 5, 15 and 27, the coupling feature between the needle hub and the needle would require another coupling mechanism, one that is likely to be more cumbersome, less secure, require additional components, or demand a larger form factor such as those mechanisms seen in the prior art.

The Federal Circuit has considered claim limitations such as the ones at issue here, and even dealt specifically with the term “injection molded.” *See, e.g., In re Nordt Dev. Co., LLC*, 881 F.3d 1371, 1375 (Fed. Cir. 2018). In *In re Nordt Dev. Co. LLC*, the Federal Circuit concluded that “injection molded” connotes structure, and should be afforded patentable weight even though “the application describe[d] ‘injection molded’ as a process of manufacture.” *Id.* The court explained that “words of limitation that can connote with equal force a structural characteristic of the product or a process of manufacture are commonly and by default interpreted in their structural sense, unless the patentee has demonstrated otherwise.” *Id.*, 1375–76 (Fed. Cir. 2018) (citing *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371–72 (Fed. Cir. 2003)). There the patentee took the position that “there are clear structural differences” between a knee brace made with fabric components and a knee brace made with injection-molded components. *Id.* The Federal Circuit viewed the limitation as similar to many other instances where “such limitations” were held “to convey structure even when they also describe a process of manufacture.” *See id.*, 1376. For example, the court cited to (1) *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d

1312, 1322 (Fed. Cir. 2006) (Newman, J., dissenting) where the court identified “a molded plastic” as an example of a process limitation that connotes structure, (2) *Vanguard Prods. Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370, 1372 (Fed. Cir. 2000) where the court held holding that the claim term “integral” describes a structural requirement, not the particular manufacturing process discussed in the specification, (3) *3M Innovative Props. Co.*, 350 F.3d at 1371 where the court found that the term “superimposed” described a structural relationship and not a process, and (4) *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 1479 (Fed. Cir. 1997), where the court concluded that “chemically engraved” was not a process term. The terms at issue here similarly connote structure and should be interpreted in their structural sense.

For at least these reasons, each of these terms should be afforded their plain and ordinary meaning with patentable weight, and not be considered product-by-process claims without patentable weight. Accordingly, Abbott’s proposed construction should be rejected and DexCom’s adopted.

## **IX. CONCLUSION**

For the foregoing reasons, the Court should adopt DexCom’s proposed constructions.

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Dated: April 18, 2024

# Exhibit 77

**THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

ABBOTT DIABETES CARE INC. and  
ABBOTT DIABETES CARE LIMITED,

Plaintiffs,

v.

DEXCOM, INC.,

Defendant.

Civil Action No. 23-239 (KAJ)

**HIGHLY CONFIDENTIAL –  
OUTSIDE ATTORNEYS’ EYES ONLY**

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DEXCOM, INC.,

Counterclaim-Plaintiff,

v.

ABBOTT DIABETES CARE INC., and  
ABBOTT DIABETES CARE SALES CORP.

Counterclaim Defendants.

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**ABBOTT’S PRELIMINARY INVALIDITY CONTENTIONS**

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subject matter, or its full scope, as of the priority date of the '204 Patent. Thus, the '204 Asserted Claims are invalid for lack of written description for this additional reason.

## **2. Indefiniteness**

For at least the reasons below, the '541 and '204 Asserted Claims discussed below are indefinite and are thus invalid.

### **a. '541 Patent**

#### **i. “to augment the receiver monitoring of the analyte state of the host” (All Asserted Claims)**

All Asserted Claims of the '541 Patent are indefinite because of their inclusion of the limitation “wherein the wireless mobile remote monitor or a user of the wireless mobile remote monitor is specifically authorized by the host to receive the alert notification message to augment the receiver monitoring of the analyte state of the host.” The same requirement is set forth in independent Claims 15-17 and propagated through all claims dependent on Claim 1 in the patent. The requirement that such authorization “augment the receiver monitoring of the analyte state of the host” lacks a defined scope in the specification, such that it is not clear to a POSITA the boundaries of what is claimed. Nowhere in the specification or prosecution history does the '541 Patent define such a limitation, or explain what is required to “augment” the receiver monitoring, which is a relative term. Thus, when the claims are read in light of the specification and prosecution history, they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention,” rendering them indefinite. *Nautilus*, 572 U.S. at 910.

#### **ii. “rules,” “settings,” “alert rules,” “alert rules settings” (All Asserted Claims)**

All Asserted Claims of the '541 Patent are indefinite because of their use of the terms “rules,” “settings,” “alert rules,” and “alert rules settings” without a defined scope in the specification such that it is not clear to a POSITA the boundaries of these terms. For example, the

'541 Asserted Claims are indefinite based on the undefined claim language which requires “wherein the event is detected by the server system based on one or more sets of recommended *alert rules settings* configured by the host using the receiver, at least one of the sets of recommended alert rules settings being modifiable by the user” of the wireless mobile remote monitor using the wireless mobile remote monitor or the digital device using the digital device. The claim thus requires certain “recommended alert rules settings” being modifiable by the user. Yet nowhere in the specification does the '541 Patent define an “alert rules settings.” The specification uses “rules” and “settings” without defining either term or making clear how they are distinct from one another, despite clearly insinuating and expressly claiming a distinction (in, for example, the claims of the related '204 Patent). Thus, when the claims are read in light of the specification and prosecution history, they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention,” rendering them indefinite. *Nautilus*, 572 U.S. at 910.

### iii. “mapping” (Claim 5)

At least claim 5 of '541 Patent is indefinite based on the undefined claim language which requires “forward[ing] ... the alert notification message to the wireless mobile remote monitor based on one or more rules mapping the event to the wireless mobile remote monitor” but does not indicate what constitutes such “mapping” or how such mapping requires to be encompassed by the claim. Nowhere in the specification does the '541 Patent define such a limitation. Thus, when the claims are read in light of the specification and prosecution history, they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention,” rendering them indefinite. *Nautilus*, 572 U.S. at 910.

### iv. “sending an acknowledgment message from the wireless mobile remote monitor to the server system indicating acknowledgement of the presented alert notification message” (Claims 1, 15-17) and “a message

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*Attorneys for Counterclaim Defendants  
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# Exhibit 78

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## Augeas

106

Aurelius

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**Au-ge-as** /ô'jéas/ Greek Mythology a legendary king whose vast stables had never been cleaned. Hercules cleaned them in a day by diverting the Alpheus River to flow through them.

**au-ger** /ô'gar/ ► **n.** a tool with a helical bit for boring holes in wood. ■ a similar larger tool for boring holes in the ground.  
— **ORIGIN** Old English *nafoġar*, from *nafu* (see *NAVE*) + *ġar* 'piercer'. The *n* was lost by wrong division of *a nauger*; compare with **ADDER** and **APRON**.

**Au-ger ef-fect** /ô'zhâ/ ► **n.** Physics a process in which an electron in an outer shell of an atom makes a transition to a vacancy in an inner shell. The energy gained is transferred to an electron that escapes from the atom.  
— **ORIGIN** 1930s: named after Pierre V. Auger (1899–1944), French physicist.

**ought** /ô't/ (also **ought**) archaic ► **pron.** anything at all: *know you ought of this fellow, young sir?*

— **ORIGIN** Old English *āwīht* (see **AYE**, **WIGHT**).

**ought** ► **n.** the digit 0; zero.

**au-gite** /ô'jit/ ► **n.** a dark green or black aluminosilicate mineral of the pyroxene group. It occurs in many igneous rocks, including basalt, gabbro, and diabase.  
— **ORIGIN** early 19th cent.: from Latin *augites*, denoting a precious stone (probably turquoise), from Greek *augitēs*, from *augē* 'luster.'

**aug-ment** ► **v.** /ô'gment/ [with obj.] make (something) greater by adding to it; increase: *he augmented his summer income by painting houses.*

► **n.** /ô'gment, -ment/ Linguistics a vowel prefixed to past tenses of verbs in Greek and other Indo-European languages.

— **ORIGIN** late Middle English: from Old French *augmenter* (verb), *augment* (noun), or late Latin *augmentare*, from Latin *augere* 'to increase.'

**aug-men-ta-tion** /ô'gmentāshən/ ► **n.** the action or process of making or becoming greater in size or amount: *the augmentation of the curriculum with new subjects.* ■ Music the lengthening of the time values of notes in a melodic part. ■ Heraldry an addition to a coat of arms granted as a mark of special honor.

— **ORIGIN** late Middle English: from late Latin *augmentatio* (n-), from the verb *augmentare* (see **AUGMENT**).

**aug-ment-a-tive** /ô'gmentatīv/ ► **adj.** Grammar (of an affix or derived word) reinforcing the idea of the original word, esp. by meaning 'a large —', as with the Italian suffix *-one* in *borrone* 'ravine,' compared with *borro* 'ditch.'

— **ORIGIN** late Middle English (in the sense 'having a tendency to increase'): from Old French *augmentatif*, -ive or medieval Latin *augmentativus*, from the verb *augmentare* (see **AUGMENT**).

**aug-ment-ed** /ô'gmentid/ ► **adj.** 1 having been made greater in size or value: *augmented pensions for those retiring at 65.*

2 Music denoting or containing an interval that is one semitone greater than the corresponding major or perfect interval: *augmented fourths.*

**aug-men-ted re-al-i-ty** ► **n.** a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.

**au grat-in** /ô'grātīn, 'gratn, grāt'an/ ► **adj.** [predic.] sprinkled with breadcrumbs or grated cheese, or both, and browned: *lentils and mushrooms au gratin.*  
— **ORIGIN** early 19th cent.: French, literally 'by grating.'

**Augs-burg** /ô'gz,bərg, 'ouks,bōrk/ a city in southern Germany, in Bavaria; pop. 262,500 (est. 2006).

**Augs-burg Con-fes-sion** a statement of the Lutheran position, drawn up mainly by Melancthon and approved by Luther before being presented to the Emperor Charles V at Augsburg on June 25, 1530.

**au-gur** /ô'gar/ ► **v.** [no obj.] (augur well/badly/ill) (of an event or circumstance) portend a good or bad outcome: *the end of the Cold War seemed to augur well* | *the return to the gold standard augured badly for industry.* ■ [with obj.] portend or bode (a specified outcome): *a new coalition would not augur a new period of social reforms.* ■ [with obj.] (archaic) foresee or predict.

► **n.** historical (in ancient Rome) a religious official who observed natural signs, esp. the behavior of birds, interpreting these as an indication of divine approval or disapproval of a proposed action.

— **DERIVATIVES** **au-gu-ral** /ô'gyərəl/ **adj.** (archaic).

— **ORIGIN** late Middle English (as a noun): from Latin, 'diviner.'

**au-gu-ry** /ô'gyərə/ ► **n.** (pl. *auguries*) a sign of what will happen in the future; an omen: *they heard the*

*sound as an augury of death.* ■ the work of an augur; the interpretation of omens.

— **ORIGIN** late Middle English (in the sense 'divination'): from Old French *augurie* or Latin *augurium* 'interpretation of omens,' from *augur* (see **AUGUR**).

**Au-gust** /ô'gast/ ► **n.** the eighth month of the year, in the northern hemisphere usually considered the last month of summer: *the sultry haze of late August* | [as modifier] *an August cold snap.*

— **ORIGIN** Old English, from Latin *augustus* 'consecrated, venerable'; named after Augustus Caesar, the first Roman emperor.

**au-gust** /ô'gast/ ► **adj.** respected and impressive: *she was in august company.*

— **DERIVATIVES** **au-gust-ly** **adv.**

— **ORIGIN** mid 17th cent.: from French *auguste* or Latin *augustus* 'consecrated, venerable.'

**Au-gus-ta** /ô'gasta/ 1 a city in eastern Georgia; since a 1996 merger, is part of Augusta–Richmond County; consolidated pop. 199,486 (est. 2008).

2 the capital of Maine, in the southwestern part of the state, on the Kennebec River; pop. 18,282 (est. 2008).

**Au-gus-tan** /ô'gastən/ ► **adj.** connected with or occurring during the reign of the Roman emperor Augustus. ■ relating to or denoting Latin literature of the reign of Augustus, including the works of Virgil, Horace, Ovid, and Livy. ■ relating to or denoting 17th- and 18th-century English literature of a style considered refined and classical, including the works of Pope, Addison, and Swift.

► **n.** a writer of the (Latin or English) Augustan age.

— **ORIGIN** from Latin *Augustanus* 'relating to Augustus' (see **AUGUSTUS**).

**Au-gus-tine** /ô'ga,stēn, ô'gastin/ ► **n.** an Augustinian friar.

— **ORIGIN** late Middle English: from Old French *augustin*, from Latin *Augustinus* 'Augustine' (see **AUGUSTINIAN**).

**Au-gus-tine, St.** /ô'ga,stēn, ô'gastən/ (died c.604), Italian churchman; known as St. Augustine of Canterbury. Sent from Rome by Pope Gregory the Great, he founded a monastery at Canterbury and became its first archbishop. Feast day, May 26.

**Au-gus-tine, St.** (354–430), doctor of the Church; known as St. Augustine of Hippo. He became bishop of Hippo in North Africa in 396. His writings, such as *Confessions* (400) and *City of God* (412–427), dominated subsequent Western theology. Feast day, August 28.

**Au-gus-tin-i-an** /ô'ga,stīnēən/ ► **adj.** 1 of or relating to St. Augustine of Hippo or his theological doctrines.

2 of or relating to a religious order observing a rule derived from St. Augustine's writings.

► **n.** 1 a member of an Augustinian order.

2 an adherent of the doctrines of St. Augustine.

**Au-gus-tus** /ô'gastəs/ (63 BC–AD 14), the first Roman emperor; born *Gaius Octavianus*; also called *Octavian*. He was adopted in the will of his great-uncle Julius Caesar and gained supreme power by his defeat of Antony in 31 BC. In 27 BC he was given the title Augustus ('venerable') and became in effect emperor.

**auk** /ôk/ ► **n.** a short-winged diving seabird found in northern oceans, typically with a black head and back and white underparts. ■ Family Alcidae (the *auk family*), which comprises the guillemots, murres, razorbills, puffins, and their relatives. See also **GREAT AUK**, **DOVEKIE**.

— **ORIGIN** late 17th cent.: from Old Norse *álka* 'razorbill.'

**auk-let** /ô'klit/ ► **n.** a small stubby auk (seabird) found in the North Pacific, typically with gray underparts. ■ *Aethia* and three other genera, family Alcidae: several species.

**auld** /ôld/ ► **adj.** Scottish form of **OLD**.

— **ORIGIN** Old English *ald*, Anglian form of **OLD**.

**auld lang syne** /ôld lang 'zīn, 'sīn/ ► **n.** times long past.

— **PHRASES** for *auld lang syne* for old times' sake.

— **ORIGIN** late 18th cent.: Scots (see **AULD**, **LANG SYNE**). The phrase was popularized as the title and refrain of a song by Robert Burns (1788).

**aum-bry** /'ambri/ ► **n.** variant spelling of **AMBRY**.

**au-na-tu-rel** /ô'na,tʃə'rel/ ► **adj.** & **adv.** with no elaborate treatment, dressing, or preparation: [as adv.] *I wear my hair au naturel these days* | [as adj.] *the cheese is delicious whether au naturel or seasoned.* ■ (humorous) naked.

— **ORIGIN** early 19th cent.: French, literally 'in the natural (state).'

**Aung San** /'oʊŋg 'sān/ (1914–47), Burmese nationalist leader. As leader of the Council of Ministers, he negotiated a promise of self-

government from the British shortly before his assassination.

**Aung San Suu Kyi** /'oʊŋg 'sān 'sōo 'ché/ (1945–), Burmese political leader, daughter of Aung San and leader of the National League for Democracy (NLD) 1988–. She was kept under house arrest 1989–95, and the military government refused to recognize her party's victory in the 1990 elections. Since 2000, she has frequently been detained again. Nobel Peace Prize (1991).



Aung San Suu Kyi

**aunt** /ant, änt/ ► **n.** the sister of one's father or mother or the wife of one's uncle. ■ informal an unrelated older woman friend, esp. of a child.

— **ORIGIN** Middle English: from Old French *ante*, from Latin *amita*.

**aunt-ie** /'antē, 'än-/ (also **aunty**) ► **n.** (pl. *aunties*) informal term for **AUNT**.

**Aunt Sally** /ant 'salē, 'änt/ ► **n.** (pl. *Aunt Sallies*) a game played in some parts of Britain in which players throw sticks or balls at a wooden dummy. ■ a dummy used in this game. ■ a person or thing that is subjected to much criticism, esp. one set up as an easy target for it.

**au pair** /ô'pe(ə)r/ ► **n.** a young foreign person, typically a woman, who helps with housework or child care in exchange for room and board.

— **ORIGIN** late 19th cent.: from French, literally 'on equal terms'. The phrase was originally adjectival, describing an arrangement between two parties paid for by the exchange of mutual services; the noun usage dates from the 1960s.

**au-ra** /ô'ra/ ► **n.** (pl. *auras*) [usu. in sing.] the distinctive atmosphere or quality that seems to surround and be generated by a person, thing, or place: *the ceremony retains an aura of mystery.* ■ a supposed emanation surrounding the body of a living creature, viewed by mystics, spiritualists, and some practitioners of complementary medicine as the essence of the individual, and allegedly discernible by people with special sensibilities. ■ any invisible emanation, esp. a scent or odor: *there was a faint aura of disinfectant.* ■ Medicine (pl. also *aurae* /ô're/) a warning sensation experienced before an attack of epilepsy or migraine.

— **ORIGIN** late Middle English (originally denoting a gentle breeze): via Latin from Greek, 'breeze, breath.' Current senses date from the 18th cent.

**au-ral** /ô'ral/ ► **adj.** of or relating to the ear or the sense of hearing: *aural anatomy* | *information held in written, aural, or database form.*

— **DERIVATIVES** **au-ral-ly** **adv.**

— **ORIGIN** mid 19th cent.: from Latin *auris* 'ear' + **-AL**.

**USAGE** The words *aural* and *oral* have the same pronunciation in standard English, which is sometimes a source of confusion. A distinctive pronunciation for *aural* has been proposed, with the first syllable rhyming with *cow*, but it has not become standard.

**Au-rang-zeb** /ô'rāŋg'zeb/ (1618–1707), Mogul emperor of Hindustan 1658–1707, who increased the Mogul empire to its greatest extent.

**au-rar** /ou,rär, 'oi-/ plural form of **EYRIR**.

**au-re-ate** /ô're-it, -ät/ ► **adj.** denoting, made of, or having the color of gold. ■ (of language) highly ornamented or elaborate.

— **ORIGIN** late Middle English: from late Latin *auratus*, from Latin *aureus* 'golden,' from *aurum* 'gold.'

**Au-re-li-an** /ô'rēlēən/ (c.215–275), Roman emperor 270–275; Latin name *Lucius Domitius Aurelianus*.

**Au-re-li-us** /ô'rēlēəs, 'Mārcus/ (121–80), Roman emperor 161–180; full name *Caesar Marcus*

## dye laser

late 16th cent., when it was re-formed from the verb.

**dye-laser** ► n. a tunable laser using the fluorescence of an organic dye.

**dye-line** /'di:lin/ ► n. another term for DIAZO.

**dyer** /'diə/ ► n. a person whose trade is the dyeing of cloth or other material.

**dyer's green-weed** ► n. a bushy, yellow-flowered Eurasian plant of the pea family, which has become naturalized in North America. The flowers were formerly used to make a yellow or green dye.

● *Genista tinctoria*, family Leguminosae.

**dyer's oak** ► n. another term for VALONIA.

**dyer's rock-et** ► n. another term for WELD.

**dye-stuff** /'di:stʌf/ ► n. a substance that yields a dye or that can be used as a dye, esp. when in solution.

**dying** /'di:ɪŋ/ ► adj. (attrib.) on the point of death: *he visited his dying mother*. ■ occurring at or connected with the time that someone dies: *he strained to catch her dying words*. ■ gradually ceasing to exist or function; in decline and about to disappear: *stone-cutting is a dying art* | *the dying embers of the fire*.

— PHRASES **to one's dying day** for the rest of one's life: *I shall remember that to my dying day*.

— ORIGIN late 16th cent.: present participle of **DIE**.

**dyke** ► n. variant spelling of DIKE.

**dyke** /'dik/ ► n. offensive a lesbian.

— DERIVATIVES **dyke-y** adj.

— ORIGIN 1940s (earlier as **BULLDYKE**): of unknown origin.

**Dylan** /'dilan/, Bob (1941–), US singer and songwriter; born **Robert Allen Zimmerman**. The leader of an urban folk-music revival in the 1960s, he became known for political and protest songs, such as "The Times They Are A-Changin'" (1964). Notable albums: *Highway 61 Revisited* (1965) and *Blood on the Tracks* (1975).

**dyn** ► abbr. dyne.

**dy-nam-ic** /di'namik/ ► adj. 1 (of a process or system) characterized by constant change, activity, or progress: *a dynamic economy*. ■ (of a person) positive in attitude and full of energy and new ideas: *she's dynamic and determined*. ■ Physics of or relating to forces producing motion. Often contrasted with **STATIC**. ■ Linguistics (of a verb) expressing an action, activity, event, or process. Contrasted with **STATIC**. ■ denoting or relating to web pages that update frequently or are generated according to an individual's search terms: *the dynamic content of these sites keeps their audience informed and up to date*. ■ Electronics (of a memory device) needing to be refreshed by the periodic application of a voltage. ■ Electronics of or relating to the volume of sound produced by a voice, instrument, or sound recording equipment. 2 Music relating to the volume of sound produced by an instrument, voice, or recording: *an astounding dynamic range*.

► n. 1 a force that stimulates change or progress within a system or process: *evaluation is part of the basic dynamic of the project*.

2 Music another term for **DYNAMICS** (sense 3).

— DERIVATIVES **dy-nam-i-cal** adj., **dy-nam-i-cal-ly** /-ik(ə)lē/ adv.

— ORIGIN early 19th cent. (as a term in physics): from French *dynamique*, from Greek *dunamikos*, from *dunamis* 'power'.

**dy-nam-ic e-qui-lib-ri-um** ► n. a state of balance between continuing processes.

**dy-nam-ic link li-brar-y** ► n. see DLL.

**dy-nam-ic met-a-mor-phism** ► n. Geology metamorphism produced by mechanical forces.

**dy-nam-ic pric-ing** ► n. the practice of pricing items at a level determined by a particular customer's perceived ability to pay.

**dy-nam-ic range** ► n. the range of acceptable or possible volumes of sound occurring in the course of a piece of music or a performance. ■ the ratio of the largest to the smallest intensity of sound that can be reliably transmitted or reproduced by a particular sound system, measured in decibels.

**dy-nam-ics** /di'namik/ ► plural n. 1 [treated as sing.] the branch of mechanics concerned with the motion of bodies under the action of forces. Compare with **STATICS**. ■ [usu. with modifier] the branch of any science in which forces or changes are considered: *chemical dynamics*.

2 the forces or properties that stimulate growth, development, or change within a system or process: *the dynamics of changing social relations*.

3 Music the varying levels of volume of sound in different parts of a musical performance.

— DERIVATIVES **dy-nam-ic-ist** /-namasist/ n. (sense 1).

**dy-nam-ic vis-cos-i-ty** ► n. a quantity measuring the force needed to overcome internal friction in a fluid.

**dy-na-mism** /'dinə,mizəm/ ► n. 1 the quality of being characterized by vigorous activity and progress: *the dynamism and strength of the economy*. ■ the quality of being dynamic and positive in attitude: *he was known for his dynamism and strong views*.

2 Philosophy, historical the theory that phenomena of matter or mind are due to the action of forces rather than to motion or matter.

— DERIVATIVES **dy-na-mist** n.

— ORIGIN mid 19th cent.: from Greek *dunamis* 'power' + **-ISM**.

**dy-na-mite** /'dinə,mɪt/ ► n. a high explosive consisting of nitroglycerine mixed with an absorbent material and typically molded into sticks. ■ something that has the potential to generate extreme reactions or to have devastating repercussions: *that policy is political dynamite*. ■ informal an extremely impressive or exciting person or thing: *both her albums are dynamite* | [as modifier] *a chick with a dynamite figure*. ■ informal, dated a narcotic, esp. heroin.

► v. [with obj.] blow up (something) with dynamite.

— DERIVATIVES **dy-na-mit-er** n.

— ORIGIN mid 19th cent.: from Greek *dunamis* 'power' + **-ITE**.

**dy-na-mo** /'dinə,mō/ ► n. (pl. **dynamos**) a machine for converting mechanical energy into electrical energy; a generator. ■ informal an extremely energetic person: *she was a dynamo in London politics*.

— ORIGIN late 19th cent.: abbreviation of *dynamo-electric machine*, from Greek *dunamis* 'power'.

**dy-na-mom-e-ter** /'dinə,məmitər/ ► n. an instrument that measures the power output of an engine.

— ORIGIN early 19th cent.: from French *dynamomètre*, from Greek *dunamis* 'power' + French *-mètre* '(instrument) measuring'.

**dy-nast** /'di,nast,-nəst/ ► n. a member of a powerful family, esp. a hereditary ruler.

— ORIGIN mid 17th cent.: via Latin from Greek *dunastēs*, from *dunasthai* 'be able'.

**dy-nas-ty** /'dinəstē/ ► n. (pl. **dynasties**) a line of hereditary rulers of a country: *the Tang dynasty*. ■ a succession of people from the same family who play a prominent role in business, politics, or another field: *the Ford dynasty*.

— DERIVATIVES **dy-nas-tic** /di'nastik/ adj., **dy-nas-ti-cal-ly** /di'nastik(ə)lē/ adv.

— ORIGIN late Middle English: from French *dynastie*, or via late Latin from Greek *dunasteia* 'lordship, power', from *dunastēs* (see **DYNAST**).

**dyne** /'din/ ► n. Physics a unit of force that, acting on a mass of one gram, increases its velocity by one centimeter per second every second along the direction that it acts.

— ORIGIN late 19th cent.: from French, from Greek *dunamis* 'force, power'.

**dy-no** /'dinō/ ► n. (pl. **dynos**) 1 short for **DYNAMOMETER**.

2 Climbing a rapid move across a rock face in order to reach a hold.

► v. (dynos, dynoing, dyno'd or dynoed) 1 [with obj.] measure (the output of an engine) with a dynamometer.

2 [no obj.] (in mountaineering) climb using dynos.

**dys-** ► comb. form bad; difficult (used esp. in medical terms): *dyspepsia* | *dysphasia*.

— ORIGIN from Greek *dys-*; related to German *zer-*, also to Old English *to-*.

**dys-ar-thri-a** /dis'ɑ:θriə/ ► n. Medicine difficult or unclear articulation of speech that is otherwise linguistically normal.

— ORIGIN late 19th cent.: from **DYS-** 'difficult' + Greek *arthron* 'joint or articulation'.

**dys-cal-cu-li-a** /diskəl'kyōlē/ ► n. Psychiatry severe difficulty in making arithmetical calculations, as a result of brain disorder.

**dys-cra-sia** /dis'kræziə/ ► n. Medicine an abnormal or disordered state of the body or of a bodily part.

— DERIVATIVES **dys-cras-ic** /-krazik/ adj.

— ORIGIN late Middle English (denoting an imbalance of physical qualities): via late Latin from Greek *duskrasia* 'bad combination', from *dus-* 'bad' + *krasis* 'mixture'.

**dys-en-ter-y** /'disən,terē/ ► n. infection of the intestines resulting in severe diarrhea with the presence of blood and mucus in the feces. ■ **bacterial dysentery** is caused by bacteria of the genus *Shigella* and can also spread by contact (see **AMEBIC DYSENTERY, SHIGELLA**).

— DERIVATIVES **dys-en-ter-ic** /disən'terik/ adj.

— ORIGIN late Middle English: from Old French *dissenterie*, or via Latin from Greek *dusenteria*, from

## Dysplastic

*dusenteros* 'afflicted in the bowels,' from *dus-* 'bad' + *entera* 'bowels'.

**dys-function** /dis'fʌŋkʃən/ ► n. abnormality or impairment in the function of a specified bodily organ or system: *bowel dysfunction*. ■ deviation from the norms of social behavior in a way regarded as bad: *inner-city dysfunction*.

**dys-functional** /dis'fʌŋkʃənəl/ ► adj. not operating normally or properly: *the telephones are dysfunctional*. ■ deviating from the norms of social behavior in a way regarded as bad: *an emotionally dysfunctional businessman* | *dysfunctional families*.

— DERIVATIVES **dys-function-al-i-ty** n., **dys-function-al-ly** adv.

**dys-gen-ic** /dis'jenik/ ► adj. exerting a detrimental effect on later generations through the inheritance of undesirable characteristics: *dysgenic breeding*.

**dys-graph-i-a** /dis'grəfiə/ ► n. Medicine inability to write coherently, as a symptom of brain disease or damage.

— DERIVATIVES **dys-graph-ic** /-grəfik/ adj.

— ORIGIN 1930s: from **DYS-** 'difficult' + Greek *-graphia* 'writing'.

**dys-ki-ne-sia** /diski'nēziə/ ► n. Medicine abnormality or impairment of voluntary movement.

— DERIVATIVES **dys-ki-net-ic** /-netik/ adj.

**dys-la-li-a** /dis'ləliə/ ► n. Medicine inability to articulate comprehensible speech, esp. when associated with the use of private words or sounds.

— ORIGIN mid 19th cent.: from **DYS-** 'difficult' + Greek *lalia* 'speech'.

**dys-lex-i-a** /dis'leksē/ ► n. a general term for disorders that involve difficulty in learning to read or interpret words, letters, and other symbols, but that do not affect general intelligence.

— DERIVATIVES **dys-lect-ic** /-lektik/ adj. & n., **dys-lex-ic** /-leksik/ adj. & n.

— ORIGIN late 19th cent.: coined in German from **DYS-** 'difficult' + Greek *lexis* 'speech' (apparently by confusion of Greek *legein* 'to speak' and Latin *legere* 'to read').

**dys-men-or-rhe-a** /dis'menə'reə/ (Brit. **dysmenorrhoea**) ► n. Medicine painful menstruation, typically involving abdominal cramps.

**dys-mor-phi-a** /dis'mɔrfiə/ ► n. Medicine deformity or abnormality in the shape or size of a specified part of the body: *muscle dysmorphia*.

— DERIVATIVES **dys-morphic** adj.

— ORIGIN late 19th cent.: from Greek *dusmorphia* 'misshapeness, ugliness', from *dus-* 'dys-' + *morphe* 'form'.

**dys-pa-reu-ni-a** /dispə'reūnē/ ► n. Medicine difficult or painful sexual intercourse.

— ORIGIN late 19th cent.: from **DYS-** 'difficult' + Greek *pareunos* 'lying with'.

**dys-pep-sia** /dis'pepsē/ ► n. indigestion. — ORIGIN early 18th cent.: via Latin from Greek *duspepsia*, from *duspeptos* 'difficult to digest'.

**dys-pep-tic** /dis'peptik/ ► adj. of or having indigestion or consequent irritability or depression.

► n. a person who suffers from indigestion or irritability.

**dys-pha-gia** /dis'faj(ə)/ ► n. Medicine difficulty or discomfort in swallowing, as a symptom of disease: *progressive dysphagia*.

**dys-pha-sia** /dis'fæziə/ ► n. Medicine language disorder marked by deficiency in the generation of speech, and sometimes also in its comprehension, due to brain disease or damage.

— DERIVATIVES **dys-pha-sic** /-fæzik/ adj.

— ORIGIN late 19th cent.: from Greek *dusphatos* 'hard to utter', from *dus-* 'difficult' + *phatos* 'spoken'.

**dys-phe-mism** /'disfə,mizəm/ ► n. a derogatory or unpleasant term used instead of a pleasant or neutral one, such as "loony bin" for "mental hospital." The opposite of **EUPHEMISM**.

**dys-pho-ni-a** /dis'fōnē/ ► n. Medicine difficulty in speaking due to a physical disorder of the mouth, tongue, throat, or vocal cords.

**dys-pho-ri-a** /dis'fōrē/ ► n. Psychiatry a state of unease or generalized dissatisfaction with life. The opposite of **EUPHORIA**.

— DERIVATIVES **dys-phor-ic** /-fōrik/ adj. & n.

— ORIGIN mid 19th cent.: from Greek *dusphoria*, from *dusphoros* 'hard to bear'.

**dys-pla-sia** /dis'plæziə/ ► n. Medicine the enlargement of an organ or tissue by the proliferation of cells of an abnormal type, as a developmental disorder or an early stage in the development of cancer.

— ORIGIN 1930s: from **DYS-** 'bad' + Greek *plasis* 'formation'.

**dys-plas-tic** /dis'plastik/ ► adj. exhibiting dysplasia. ■ (of dogs) having malformed joints resulting from a genetic condition. ■ (of moles) generally larger

**profiteer**

or in a black market: (as noun **profiteering**) the **profiteering** of tabloid journalists.

► **n.** a person who profiteers: a war profiteer.

**pro-fit-er-ole** /prə'fɪtə, rɒl/ ► **n.** a small hollow pastry typically filled with cream and covered with chocolate sauce.

— **ORIGIN** French, diminutive of *profit* 'profit.'

**pro-fit-mar-gin** ► **n.** the amount by which revenue from sales exceeds costs in a business.

**pro-fit-shar-ing** (also **profit sharing**) ► **n.** a system in which the people who work for a company receive a direct share of the profits.

**pro-fit-tak-ing** (also **profit taking**) ► **n.** Stock Market the sale of securities that have risen in price.

**pro-fit warn-ing** ► **n.** a statement issued by a company advising the stock market that profits will be lower than expected.

**pro-flig-ate** /prə'flɪɡət, -lə'ɡət/ ► **adj.** recklessly extravagant or wasteful in the use of resources: **profligate consumers of energy.** ► **licentious; dissolute:** he succumbed to drink and a profligate lifestyle.

► **n.** a licentious, dissolute person.

— **DERIVATIVES** **pro-flig-a-cy** /prə'flɪɡəsə/ **n.**, **pro-flig-a-tely** **adv.**

— **ORIGIN** mid 16th cent. (in the sense 'overthrown, routed'): from Latin *profligatus* 'dissolute, past participle of *profligare* 'overthrow, ruin,' from *pro-* 'forward, down' + *fligare* 'strike down.'

**pro-form** /prə'fɔrm/ ► **n.** Linguistics a word or lexical unit that is dependent for its meaning on reference to some other part of the context or sentence in which it occurs, for example, a pronoun replacing a noun or noun phrase, or a verb replacing a clause, such as *do* in *she likes chocolate and so do I*.

**pro-for-ma** /prə'fɔrmə/ ► **adv.** as a matter of form or politeness: he nodded to him *pro forma*.

► **adj.** done or produced as a matter of form: *pro forma reports.* ► [attrib.] denoting a standard document or form, esp. an invoice sent in advance of or with goods supplied. ► [attrib.] (of a financial statement) showing potential or expected income, costs, assets, or liabilities, esp. in relation to some planned or expected act or situation.

► **n.** a standard document or form or financial statement of such a type.

— **ORIGIN** early 16th cent.: from Latin.

**pro-found** /prə'faʊnd, prɔ:/ ► **adj.** (**profounder, profoundest**) 1 (of a state, quality, or emotion) very great or intense: *profound social changes* | *profound feelings of disquiet.* ► (of a disease or disability) very severe; deep-seated: *a case of profound liver failure.*

2 (of a person or statement) having or showing great knowledge or insight: *a profound philosopher.* ► (of a subject or thought) demanding deep study or thought: *expressing profound truths in simple language.*

3 archaic at, from, or extending to a great depth; very deep: *he opened the door with a profound bow.*

► **n.** (**the profound**) literary the vast depth of the ocean or of the mind.

— **DERIVATIVES** **pro-found-ness** **n.**

— **ORIGIN** Middle English: from Old French *profund*, from Latin *profundus* 'deep,' from *pro* 'before' + *fundus* 'bottom.' The word was used earliest in the sense 'showing deep insight.'

**pro-found-ly** /prə'faʊndli, prɔ:/ ► **adv.** [as submodifier] to a profound extent; extremely: *a profoundly disturbing experience.* in a profound way; greatly: *he profoundly altered the whole course of my life.*

**pro-fun-di-ty** /prə'fʌndəti/ ► **n.** (pl. **profundities**) deep insight; great depth of knowledge or thought: *the simplicity and profundity of the message.* ► great depth or intensity of a state, quality, or emotion: *the profundity of her misery.* ► a statement or idea that shows great knowledge or insight.

**pro-fuse** /prə'fjuːs, prɔ:/ ► **adj.** (esp. of something offered or discharged) exuberantly plentiful; abundant: *I offered my profuse apologies.* ► archaic (of a person) lavish; extravagant: *they are profuse in hospitality.*

— **DERIVATIVES** **pro-fuse-ly** **adv.**, **pro-fuse-ness** **n.**

— **ORIGIN** late Middle English (in the sense 'extravagant'): from Latin *profusus* 'lavish, spread out,' past participle of *profundere*, from *pro-* 'forth' + *fundere* 'pour.'

**pro-fu-sion** /prə'fjuːʒən, prɔ:/ ► **n.** (in sing.) an abundance or large quantity of something: *a rich profusion of wildflowers* | *the foxgloves growing in profusion among the ferns.*

— **ORIGIN** mid 16th cent.: via French from Latin *profusio(n-)*, from *profundere* 'pour out.' Early use expressed the senses 'extravagance,' 'squandering,' and 'waste.'

**prog** /præg/ informal ► **adj.** [attrib.] (of rock music) progressive: *prog rock bands.*

— **ORIGIN** 1950s: abbreviation.

**pro-gen-i-tive** /prə'jenətɪv, prɔ:/ ► **adj.** formal having the quality of producing offspring; having reproductive power.

**pro-gen-i-tor** /prə'jenətər, prɔ:/ ► **n.** a person or thing from which a person, animal, or plant is descended or originates; an ancestor or parent: *his sons and daughters were the progenitors of many of Scotland's leading noble families.* ► a person who originates an artistic, political, or intellectual movement: *the progenitor of modern jazz.*

— **DERIVATIVES** **pro-gen-i-to-ri-al** /-jenə'tɔəriəl/ **adj.**

— **ORIGIN** late Middle English: from Old French *progeniteur*, from Latin *progenitor*, from *progenit-* 'begotten,' from the verb *progignere*, from *pro-* 'forward' + *gignere* 'beget.'

**prog-e-ny** /prə'jənɪ/ ► **n.** [treated as sing. or pl.] a descendant or the descendants of a person, animal, or plant; offspring: *the progeny of mixed marriages.* — **ORIGIN** Middle English: from Old French *progenie*, from Latin *progenies*, from *progignere* 'beget' (see **PROGENITOR**).

**pro-ge-ri-a** /prɔ'jɪ(ə)rɪə, prɔ:/ ► **n.** Medicine a rare syndrome in children characterized by physical signs and symptoms suggestive of premature old age. — **ORIGIN** early 20th cent.: modern Latin, from Greek *progerēs* 'prematurely old.'

**pro-ges-ter-one** /prɔ'jestə, rɒn, prɔ:/ ► **n.** Biochemistry a steroid hormone released by the corpus luteum that stimulates the uterus to prepare for pregnancy. — **ORIGIN** 1930s: blend of **PROGESTIN** and the German synonym *Luteosteron* (from *corpus luteum* + *sterol*).

**pro-ges-tin** /prɔ'jestɪn/ ► **n.** Biochemistry a natural or synthetic steroid hormone, such as progesterone, that maintains pregnancy and prevents further ovulation during pregnancy.

**pro-ges-to-gen** /prɔ'jestəʒən/ ► **n.** Biochemistry another term for **PROGESTIN**.

— **ORIGIN** 1940s: from **PROGESTIN** + **-GEN**.

**pro-glott-id** /prɔ'glɒtɪd/ (also **proglottis** /-glɒtɪs/) ► **n.** Zoology each segment in the strobila of a tapeworm, containing a complete sexually mature reproductive system.

— **ORIGIN** late 19th cent.: from Greek *proglōssis*, *proglōssid-* 'point of the tongue,' based on *glōssa*, *glōtta* 'tongue' (because of its shape).

**pro-na-thous** /prə'næθəs, prə'nə-/ ► **adj.** (esp. of a person) having a projecting lower jaw or chin. ► (of a jaw or chin) projecting. ► (of an insect) having projecting mouthparts.

— **DERIVATIVES** **pro-nath-ic** /prə'næθɪk/ **adj.**, **pro-nath-ism** /-θɪzəm/ **n.**

— **ORIGIN** mid 19th cent.: from *pro-* 'before' + Greek *gnathos* 'jaw' + *-ous*.

**pro-gnō-sis** /prə'gnɒsəs/ ► **n.** (pl. **prognoses** /-sɛz/) the likely course of a disease or ailment: *the disease has a poor prognosis.* ► a forecast of the likely course of a disease or ailment: *it is very difficult to make an accurate prognosis.* ► a forecast of the likely outcome of a situation: *gloomy prognoses about overpopulation.*

— **ORIGIN** mid 17th cent.: via late Latin from Greek *prognōsis*, from *pro-* 'before' + *gignōskein* 'know.'

**pro-gnō-stic** /prə'gnɒstɪk/ ► **adj.** serving to predict the likely outcome of a disease or ailment; of or relating to a medical prognosis.

► **n.** archaic an advance indication or portent of a future event: *a one-banded caterpillar is considered a prognostic of a mild winter.*

— **DERIVATIVES** **pro-gnō-sti-cal-ly** /-ɪk(ə)lə/ **adv.**

— **ORIGIN** late Middle English: from Latin *prognosticus*, from Greek *prognōstikos*, from *prognōsis* (see **PROGNOSIS**).

**pro-gnō-sti-cate** /prə'gnɒstəkət/ ► **v.** [with obj.] foretell or prophesy (an event in the future): *the economists were prognosticating financial Armageddon.*

— **DERIVATIVES** **pro-gnō-sti-ca-tor** /-kətər/ **n.**, **pro-gnō-sti-ca-to-ry** /-kətərɪ/ **adj.**

— **ORIGIN** late Middle English: from medieval Latin *prognosticat-*, from the verb *prognosticare* 'make a prediction' (see **PROGNOSTIC**).

**pro-gnō-sti-ca-tion** /prə'gnɒstəkəʃən/ ► **n.** the action of foretelling or prophesying future events: *an unprecedented amount of soul-searching and prognostication.* ► a prophecy: *these gloomy prognostications proved to be unfounded.*

— **ORIGIN** late Middle English: from Old French *prognosticacion*, from medieval Latin *prognosticatio(n-)*, from the verb *prognosticare* (see **PROGNOSTICATE**).

**pro-grade** /prɔ'græd/ ► **adj.** 1 Astronomy (of planetary motion) proceeding from west to east; direct. The opposite of **RETROGRADE**.

2 Geology (of a metamorphic change) resulting from an increase in temperature or pressure or both. Compare with **RETROGRADE**.

► **v.** [no obj.] Geology (of a beach or coastline) advance toward the sea as a result of the accumulation of waterborne sediment.

— **DERIVATIVES** **pro-gra-da-tion** /prɔ'grədəʃən, -prɔ'grəd/ **n.**

— **ORIGIN** early 20th cent. (as a verb): from *pro-* 'forward' + **RETROGRADE**.

**pro-gram** /prɔ'græm, -græm/ (Brit. **programme**)

► **n.** 1 a planned series of future events, items, or performances: *a weekly program of films* | *the program includes Dvorak's New World Symphony.*

► a set of related measures, events, or activities with a particular long-term aim: *the nuclear power program.*

2 a sheet or booklet giving details of items or performers at an event or performance: *a theater program.*

3 a presentation or item on radio or television, esp. one broadcast regularly between stated times: *a nature program.* ► dated a radio or television service or station providing a regular succession of programs on a particular frequency; a channel.

4 (**program**) a series of coded software instructions to control the operation of a computer or other machine.

► **v.** (**programs, programming, programmed, or programing, programmed**) [with obj.] 1 (**program**) provide (a computer or other machine) with coded instructions for the automatic performance of a particular task: *it is a simple matter to program the computer to recognize such symbols.* ► input (instructions for the automatic performance of a task) into a computer or other machine: *simply program in your desired volume level.* ► cause (a person or animal) to behave in a predetermined way: *all members of a particular species are programmed to build nests in the same way.*

2 arrange according to a plan or schedule: *we learn how to program our own lives consciously.*

► schedule (an item) within a framework: *the next stage of the treaty is programmed for 1996.* ► broadcast (an item): *the station does not program enough contemporary works.*

— **PHRASES** **get with the program** [often in imperative] informal do what is expected of one; adopt the prevailing viewpoint.

— **DERIVATIVES** **pro-gram-ma-bil-i-ty** /-ə'bɪləti/ **n.**, **pro-gram-ma-ble** /prɔ'græməbəl, prɔ'græm-/ **adj.**

— **ORIGIN** early 17th cent. (in the sense 'written notice'): via late Latin from Greek *programma*, from *graphein* 'write publicly,' from *pro* 'before' + *graphein* 'write.'

**pro-gram-mat-ic** /prɔ'græmatɪk/ ► **adj.** of the nature of or according to a program, schedule, or method: *a programmatic approach to change.* ► of the nature of program music.

— **DERIVATIVES** **pro-gram-mat-i-cal-ly** /-ɪk(ə)lə/ **adv.**

**pro-grammed cell death** ► **n.** less technical term for **APOPTOSIS**.

**pro-gram-mer** /prɔ'græmə/ (also **programer**)

► **n.** a person who writes computer programs. ► a device that automatically controls the operation of something in accordance with a prescribed program.

**pro-gram-ming** /prɔ'græmɪŋ/ ► **n.** 1 the action or process of writing computer programs.

2 the action or process of scheduling something, esp. radio or television programs: *the programming of shows.* ► radio or television programs that are scheduled or broadcast: *the station is to expand its late-night programming.*

**pro-gram mu-sic** ► **n.** music that is intended to evoke images or convey the impression of events. Compare with **ABSOLUTE MUSIC**.

**pro-gram trad-ing** ► **n.** the simultaneous purchase and sale of many different stocks, or of stocks and related futures contracts, with the use of a computer program to exploit price differences in different markets.

**pro-gress** ► **n.** /'prɒgrəs, 'præg.rəs, 'prɒ.gres/ forward or onward movement toward a destination: *the darkness did not stop my progress* | *they failed to make any progress up the narrow estuary.* ► advance or development toward a better, more complete, or more modern condition: *we are making progress toward equal rights.* ► Brit. archaic a state journey or official tour, esp. by royalty.

► **v.** /prɒ'gres/ [no obj.] move forward or onward in space or time: *as the century progressed, the quality of telescopes improved.* ► advance or develop toward a better, more complete, or more modern state: *work on the pond is progressing.* ► [with obj.] (usu. as **adj.** **progressed**) Astrology calculate the position of (a planet) or of all the planets and coordinates of (a chart) according to the technique of progression.

**PRONUNCIATION KEY** ə'ago, up; ə'over, fur; a'hāt; ā'ate; ā'car; ē'let; ē'see; ī'fit; ī'by; NG sing; ō'go; ō'law, fur; ō'toy; ōō'good; ōō'goo; ōu'out; TH thin; TH then; ZH vision

P

appearance or movement, the sand undulated and was ridged with ripples. ■ a gentle rising and falling sound, esp. of laughter or conversation, that spreads through a group of people: a ripple of laughter ran around the room. ■ a particular feeling or effect that spreads through or to someone or something: his words set off a ripple of excitement within her. ■ Physics a wave on a fluid surface, the restoring force for which is provided by surface tension rather than gravity, and that consequently has a wavelength shorter than that corresponding to the minimum speed of propagation. ■ Physics small periodic, usually undesirable, variations in electrical voltage superimposed on a direct voltage or on an alternating voltage of lower frequency.

2 a type of ice cream with wavy lines of colored flavored syrup running through it: raspberry ripple. ■ v. [no obj.] (of water) form or flow with small waves on the surface: the Mediterranean rippled and sparkled (as adj. rippling) the rippling waters. ■ [with obj.] cause (the surface of water) to form small waves: a cool wind rippled the surface of the estuary. ■ move or cause to move in a way resembling such waves: fields of grain rippling in the wind. ■ (of a sound or feeling) spread through a person, group, or place: applause rippled around the tables. ■ (as adj. rippled) having the appearance of small waves: a broad noodle, rippled on both sides, wider than fettuccine.

- DERIVATIVES **rip-plet** /'riplɪt/ n., **rip-ply** /'riplɪ(ə)l/ adj. - ORIGIN late 17th cent. (as a verb): of unknown origin.

**rip-ple ef-fect** ► n. the continuing and spreading results of an event or action: while their marriage made an impact on their friends, the ripple effect on family members was even more profound.

**rip-ple marks** ► plural n. a system of subparallel wavy ridges and furrows left on sand or mud by the action of water or wind, and sometimes fossilized.

**rip-rap** /'rip,rəp/ ► n. loose stone used to form a foundation for a breakwater or other structure.

► v. (**rip-raps**, **rip-rapping**, **rip-rapped**) [with obj.] strengthen with such a structure.

- ORIGIN mid 19th cent. (originally US): duplication of RAP.

**rip-roar-ing** ► adj. [attrib.] full of energy and vigor: a rip-roaring rodeo.

- DERIVATIVES **rip-roar-ing-ly** adv.

**rip-saw** /'rip,sɔ:/ ► n. a coarse saw for cutting wood along the grain.

**rip-snot-ing** /'rip,snɔ:tɪŋ/ ► adj. [attrib.] informal showing great vigor or intensity: a rip-snoting editorial.

- DERIVATIVES **rip-snot-er** /-'snɔ:tər/ n., **rip-snot-ing-ly** adv.

**rip-stop** /'rip,stɒp/ ► n. nylon fabric that is woven so that a tear will not spread.

**rip-tide** /'rip,tɪd/ ► n. a strong current caused by tidal flow in confined areas such as inlets and presenting a hazard to swimmers and boaters. ■ another term for RIP CURRENT.

**Rip Van Win-kle** /'rip,vən'wɪŋkəl/ the hero of a story in Washington Irving's *Sketch Book* (1819-20), who fell asleep in the Catskill Mountains and awoke after twenty years to find the world completely changed.

**RISC** /'rɪsk/ ► n. [usu. as modifier] Computing a computer based on a processor or processors designed to perform a limited set of operations extremely quickly. ■ computing using this kind of computer. - ORIGIN 1980s: acronym from *reduced instruction set computer* (or *computing*).

**rise** /'rɪz/ ► v. (past **rose** /'rɒz/; past participle **risen** /'rɪzən/) [no obj.] 1 move from a lower position to a higher one; come or go up: the tiny aircraft rose from the ground. ■ (of the sun, moon, or another celestial body) appear above the horizon: the sun had just risen. ■ (of a fish) come to the surface of water: a fish rose and was hooked and landed. ■ (of a voice) become higher in pitch: my voice rose an octave or two as I screamed. ■ reach a higher position in society or one's profession: the officer was a man of great courage who had risen from the ranks. ■ (rise above) succeed in not being limited or constrained by (a restrictive environment or situation): he struggled to rise above his humble background. ■ (rise above) be superior to: I try to rise above prejudice. 2 get up from lying, sitting, or kneeling: she pushed back her chair and rose. ■ get out of bed, esp. in the morning: I rose and got dressed. ■ chiefly Brit. (of a meeting or a session of a court) adjourn: the judge's remark heralded the signal for the court to rise. ■ be restored to life: your sister has risen from the dead | he would rise again from the dead on the third day. ■ (of a wind) start to blow or to blow more strongly: the wind continued to rise. ■ (of a river) have its

source: the Euphrates rises in Turkey. ■ cease to be submissive, obedient, or peaceful: the activists urged militant factions to rise up. ■ (rise to) (of a person) react with annoyance or argument (or provocation): he didn't rise to my teasing. ■ (rise to) find the strength or ability to respond adequately to (a challenging situation): many participants in the race had never sailed before, but they rose to the challenge. 3 (of land or a feature following the contours of the land) incline upward; become higher: the moorlands rise and fall in gentle folds. ■ (of a building, mountain, or other high object or structure) be much taller than the surrounding landscape: the cliff rose more than a hundred feet above us. ■ (of someone's hair) stand on end: he felt the hairs rise on the back of his neck. ■ (of a building) undergo construction from the foundations: rows of two-story houses are slowly rising. ■ (of dough) swell by the action of yeast: leave the dough in a warm place to rise. ■ (of a bump, blister, or weal) appear as a swelling on the skin: blisters rose on his burned hand. ■ (of a person's stomach) become nauseated: Fabio's stomach rose at the foul bedding.

4 increase in number, size, amount, or quality: land prices had risen. ■ (of the sea, a river, or other body of water) increase in height to a particular level, typically through tidal action or flooding: the river level rose so high the work had to be abandoned | figurative the rising tide of crime. ■ (of an emotion) develop and become more intense: he felt a tide of resentment rising in him. ■ (of a sound) become louder; be audible above other sounds: her voice rose above the clamor. ■ (of a person's mood) become more cheerful: her spirits rose as they left the ugly city behind. ■ (of the color in a person's face) become deeper, esp. as a result of embarrassment: he was teasing her, and she could feel her color rising. ■ (of a barometer or other measuring instrument) give a higher reading.

5 (rising) approaching (a specified age): she was thirty-nine rising forty | Polly shall have a young mare rising three years old.

► n. 1 an upward movement; an instance of becoming higher: the bird has a display flight of steep flapping rises. ■ an act of a fish moving to the surface to take a fly or bait. ■ an increase in sound or pitch: the rise and fall of his voice. ■ an instance of social, commercial, or political advancement: few models have had such a meteoric rise. ■ an upward slope or hill. ■ the vertical height of a step, arch, or incline. ■ another term for RISER (sense 2).

2 an increase in amount, extent, size, or number: local people are worried by the rise in crime. ■ Brit. an increase in salary or wages.

3 [in sing.] a source; an origin: it was here that the brook had its rise.

- PHRASES **get (or take) a rise out of** informal provoke an angry or irritated response from (someone), esp. by teasing. **on the rise** becoming greater or more numerous; increasing: prices were on the rise. ■ becoming more successful: young stars on the rise. **rise and shine** [usu. in imperative] informal get out of bed smartly; wake up. **rise to the bait** see BAIT. **rise with the sun (or lark)** get up early in the morning. **someone's star is rising** someone is becoming more successful or popular.

- ORIGIN Old English *risan* 'make an attack,' 'wake, get out of bed,' of Germanic origin; related to Dutch *rijzen* and German *reisen*.

**ris-er** /'rɪzər/ ► n. 1 [with adj.] a person who habitually gets out of bed at a particular time of the morning: late risers always exasperate early risers.

2 a vertical section between the treads of a staircase.

3 a vertical pipe for the upward flow of liquid or gas.

4 a low platform on a stage or in an auditorium, used to give greater prominence to a speaker or performer.

5 a strip of webbing joining the harness and the rigging lines of a parachute or paraglider.

**rise time** ► n. Electronics the time required for a pulse to rise from 10 percent to 90 percent of its steady value.

**rish-i** /'rɪʃi/ ► n. (pl. **rishis**) a Hindu sage or saint. - ORIGIN from Sanskrit *r̥ṣi*.

**ris-i-ble** /'rɪzəbəl/ ► adj. such as to provoke laughter: a risible scene of lovemaking in a tent. ■ rare (of a person) having the faculty or power of laughing; inclined to laugh.

- DERIVATIVES **ris-i-bil-i-ty** /'rɪzə'bɪləti/ n., **ris-i-bly** /-blɪ/ adv.

- ORIGIN mid 16th cent. (in the sense 'inclined to laughter'): from late Latin *risibilis*, from Latin *ris* 'laughed,' from the verb *ridere*.

**ris-ing** /'rɪzɪŋg/ ► adj. 1 going up, increasing, or sloping upward: the rising temperature | rising ground. ■ advancing to maturity or high standing: the rising generation of American writers. ■ approaching (a higher level, grade, age, etc.): a

rising senior at North Carolina State. ■ Astrology (of a sign) ascendant.

2 [postpositive] Heraldry (of a bird) depicted with the wings open but not fully displayed, as if preparing for flight.

► n. an armed protest against authority; a revolt.

**ris-ing main** ► n. Brit. a vertical pipe that rises from the ground to supply municipal water to a building. ■ the vertical pipe of a water pump.

**ris-ing trot** ► n. a style of riding in which a rider rises from the saddle on every second stride of a horse's trotting pace.

**risk** /'rɪsk/ ► n. a situation involving exposure to danger: flouting the law was too much of a risk | all outdoor activities carry an element of risk. ■ [in sing.] the possibility that something unpleasant or unwelcome will happen: reduce the risk of heart disease | [as modifier] a high consumption of caffeine was suggested as a risk factor for loss of bone mass. ■ [usu. in sing. with adj.] a person or thing regarded as likely to turn out well or badly, as specified, in a particular context or respect: Western banks regarded Romania as a good risk. ■ [with adj.] a person or thing regarded as a threat or likely source of danger: she's a security risk | gloss paint can burn strongly and pose a fire risk. ■ (usu. risks) a possibility of harm or damage against which something is insured. ■ the possibility of financial loss: [as modifier] project finance is essentially an exercise in risk management.

► v. [with obj.] expose (someone or something valued) to danger, harm, or loss: he risked his life to save his dog. ■ act or fail to act in such a way as to bring about the possibility of (an unpleasant or unwelcome event): unless you're dealing with pure alcohol you're risking contamination from benzene. ■ incur the chance of unfortunate consequences by engaging in (an action): he was far too intelligent to risk attempting to deceive her.

- PHRASES **at risk** exposed to harm or danger: 23 million people in Africa are at risk from starvation. **at one's (own) risk** used to indicate that if harm befalls a person or their possessions through their actions, it is their own responsibility: they undertook the adventure at their own risk. **at the risk of doing something** although there is the possibility of something unpleasant resulting: at the risk of boring people to tears, I repeat the most important rule in painting. **at risk to oneself (or something)** with the possibility of endangering oneself or something: he visited prisons at considerable risk to his health. **risk one's neck** put one's life in danger. **run the risk (or run risks)** expose oneself to the possibility of something unpleasant occurring: she preferred not to run the risk of encountering his sister.

- ORIGIN mid 17th cent.: from French *risque* (noun), *risquer* (verb), from Italian *risco* 'danger' and *rischiare* 'run into danger'.

**risk as-sess-ment** ► n. a systematic process of evaluating the potential risks that may be involved in a projected activity or undertaking.

**risk cap-i-tal** ► n. another term for VENTURE CAPITAL.

**risk man-age-ment** ► n. (in business) the forecasting and evaluation of financial risks together with the identification of procedures to avoid or minimize their impact.

**risk-y** /'rɪskɪ/ ► adj. (riskier, riskiest) full of the possibility of danger, failure, or loss: it was much too risky to try to disarm him.

- DERIVATIVES **risk-i-ly** /-kəlɪ/ adv., **risk-i-ness** n.

**Ri-sor-gi-men-to** /rɪˌsɔ:rdʒiˈmen.tə, -sɔ:/ a movement for the unification and independence of Italy, which was achieved in 1870.

The restoration of repressive regimes after the Napoleonic Wars led to revolts in Naples and Piedmont (1821) and Bologna (1831). With French aid the Austrians were driven out of northern Italy by 1859, and the south was won over by Garibaldi. Voting resulted in the acceptance of Victor Emmanuel II as the first king of a united Italy in 1861.

- ORIGIN Italian, literally 'resurrection.'

**ri-sot-to** /'rɪzɒtə, -sɒtə/ ► n. (pl. **risottos**) an Italian dish of rice cooked in stock with other ingredients such as meat and vegetables.

- ORIGIN Italian, from *riso* 'rice.'

**ris-qué** /'rɪskə/ ► adj. slightly indecent or liable to shock, esp. by being sexually suggestive: his risqué humor.

- ORIGIN mid 19th cent.: French, past participle of *risquer* 'to risk.'

PRONUNCIATION KEY a ago, up; ʌ over, fur; a hat; ɛ ate; ʌ car; e let; i see; i fit; i by; NG sing; ɔ go; ɔ law, for; o toy; ɔ good; ɔ goo; ou out; TH thin; TH then; zh vision

# Exhibit 7

# CAMBRIDGE

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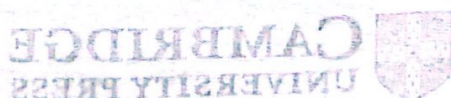
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**auditory** /'ɔːdɪəˈtɔːri-, -tʊr-i/ *adj* [not gradable] specialized of or involving hearing ○ *The stroke impaired her auditory function but not her vision.*

**augment** /ɔːg'ment/ *v* [T] to make something larger or fuller by adding something to it ○ *He augmented his income by taking a second job.*

**august** <IMPORTANT> /ɔː'gʌst/ *adj* *fml* having great importance and respect in society ○ *We toured the august chambers of the Supreme Court.*

**August** <MONTH> /'ɔːgəst/, *abbreviation Aug.* *n* [C/U] the eighth month of the year, after July and before September

\***aunt** /ænt, aːnt, ant/ *n* [C] the sister of someone's mother or father, or the wife of someone's uncle ○ *We stopped off to visit my aunt and uncle in Boston.* ♦ *Picture: family tree* ♦ *Study Pages: Titles and Forms of Address*

**au pair** /ou'per, -'pær/ *n* [C] *pl au pairs* a foreign person, usually a young woman, who lives with a family and looks after their children or cleans the house in return for meals, a room, and a small payment

**aura** /'ɔːrə/ *n* [C] a feeling or character that a person or place seems to have ○ *The hotel had an aura of fading glamor about it.*

**aural** /'ɔːrəl/ *adj* [not gradable] relating to hearing ○ *She doesn't speak English well, but her aural comprehension is good.*

**auspices** /'ɔːspə'seɪz, -sɪz/ *pl n* approval, support, and control ○ *Relief volunteers worked under the auspices of the Red Cross.*

**auspicious** /ɔː'spɪʃəs/ *adj* suggesting a positive and successful future ○ *Winning her first seven cases was an auspicious beginning for the young lawyer.*

**austere** /ɔː'stɪr/ *adj* **1** plain and without decoration, comforts, or anything extra ○ *Nuns lead an austere life.* ○ *She depicts the austere beauty of the desert.* **2** An austere person does not seem friendly.

**austerity** /ɔː'ster-ət-i-, -stɪr-/ *n* [U] **1** *The warriors led a life of austerity.* **2** Austerity is also a bad economic condition that does not allow luxuries: *Military spending continues even in periods of austerity.*

**authentic** /ɔː'θentɪk/ *adj* being what it is claimed to be; GENUINE ○ *an authentic Goya drawing* ○ *How can we be sure the signature is authentic?* ○ *Sylvia's serves authentic soul food.*

**authenticity** /ɔː'θen'tɪs-ət-i-, -θən-/ *n* [U] ○ *Officials questioned the authenticity of his claim.*

\***author** /'ɔːθər/ *n* [C] a writer of a book, article, etc., or a person whose main job is writing books ○ *a talented young author* ○ *He is the author of seven books.*

**author** /'ɔːθər/ *v* [T] ○ *Murphy authored the new legislation.*

**authorship** /'ɔːθər,ʃɪp/ *n* [U] the origin of a written work ○ *No one would admit authorship of the memo.*

**authoritarian** /ɔːθɔːr-ə'ter-iːən, -θər-/ *adj* demanding total obedience to those in positions of authority ○ *an authoritarian ruler/parent*

\***authority** /ə'θɔːr-ət-i-, ə'θər-/ *n* [C/U] **1** the power to control or demand obedience from others ○ [U] *The police have no legal authority in these disputes.* ○ [U] *We have to find someone in authority (= a position of power).* **2** An authority is someone with official responsibility for a particular area of activity: [C] *government/church authorities* **3** The authorities are the police or other government officials: *No attacks were reported to the authorities.* **4** An authority on a subject is an expert on it: [C] *an authority on immigration law*

**authoritative** /ə'θɔːr-ə'tetɪv, ə'θər-/ *adj* having the power of special knowledge, or (of a person) showing the confidence of having special knowledge ○ *an authoritative manner* ○ *Her opinion on the subject was considered authoritative.*

**authoritatively** /ə'θɔːr-ə'tetɪv-li, ə'θər-/ *adv* ○ *He spoke authoritatively about police work.*

**authorize** /'ɔːθə'reɪz/ *v* [T] to give official permission for something to happen, or to give someone official permission to do something ○ *The board authorized a new contract.*

**authorization** /'ɔːθə'reɪz-ɪʃən/ *n* [C/U] ○ [U] *I can't issue a check without authorization.*

**autism** /'ɔːtɪz-əm/ *n* [U] *medical* an illness that starts in young children and causes behavior that is unusually centered on the self while limiting development of social and communication skills

**autistic** /ɔː'tɪs-tɪk/ *adj* ○ *She works with autistic children.*

**auto** /'ɔːtə-, 'ɑː-/ *n* [C] *pl autos* short form of AUTOMOBILE ○ *auto makers/manufacturers* ○ *the auto industry*

**autobiography** /'ɔːtə-baɪ'ag-rə-fi/ *n* [C/U] the story of a person's life as written by that person, or the area of literature relating to books that describe such stories ○ [U] *The book was a mixture of family history and autobiography.* ○ Compare BIOGRAPHY

**autobiographical** /'ɔːtə-baɪ-ə'græf-ɪ-kəl/ *adj* describing the writer or based on the writer's life ○ *an autobiographical novel*

**autocracy** /ɔː'tak-rə-si/ *n* [C/U] government by a single person or small group that has unlimited power or authority, or a country or society that has this form of government

**autocratic** /'ɔːtə'kræt-ɪk/ *adj* ○ *an autocratic regime*

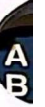
**autograph** /'ɔːtə-græf/ *n* [C] a signature, esp. of a famous person ○ *He thought I was a famous actor and asked for my autograph.*

**autograph** /'ɔːtə-græf/ *v* [T] to write your signature on something, often for someone else to keep

**automaker** /'ɔːtə-mer-kər, 'ɑː-/ *n* [C] a big company that makes cars ○ *The nation's No. 3 automaker set an all-time monthly sales record in June.*

**automated** /'ɔːtə-mert/ *adj* (esp. of a process in business or industry) made to operate by ma-

E



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# Dictionary

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Language**

**FIFTH  
EDITION**

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**Dvořák** (dvōr'zhāk, -zhāk), Antonín 1841–1904. Czech composer whose works, such as *Slavonic Dances* (1878), often incorporate folk music. His final symphony, *From the New World* (1893), was composed while he was director of the National Conservatory in New York City (1892–1895).

**Dvo-rak keyboard** (dvōr'āk) *n.* A keyboard with a layout designed to increase the speed and ease of typing, having a home row of keys that consist of A, O, E, U, I, D, H, T, N, and S. [After August Dvořák (1894–1975), American educator.]

**DVR** *abbr.* digital video recorder

**DVT** *abbr.* deep venous thrombosis

**DW** *abbr.* 1. dead weight 2. distilled water

**DW** *abbr.* Law dock warrant

**Dwa-mish** (dwā'mish) *n.* Variant of **Duwamish**.

**dwarf** (dwōrf) *n., pl. dwarfs or dwarves* (dwōrvz) **1a.** A person with a usually genetic disorder resulting in atypically short stature and often disproportionate limbs. **b.** An atypically small animal or plant. **2.** A small creature resembling a human, often having magical powers, appearing in legends and fairy tales. **3.** A dwarf star. **♦ v.** **dwarfed, dwarf-ing, dwarfs** —*tr.* **1.** To check the natural growth or development of; stunt: "The oaks were dwarfed from lack of moisture" (John Steinbeck). **2.** To cause to appear small by comparison: "Together these two big men dwarfed the tiny Broadway office" (Saul Bellow). —*intr.* To become stunted or grow smaller. [Middle English *dwerf* < Old English *dweorh*.] —**dwarf-ish** *adj.*

**dwarf cornel** *n.* See **bunchberry**.

**dwarf galaxy** *n.* A small, dim galaxy, intermediate in size between a regular galaxy and a globular cluster.

**dwarf-ism** (dwōr'fīz'əm) *n.* **1.** The medical condition of being a dwarf. **2.** The condition of being a dwarf animal or plant. In both senses also called **nanism**.

**dwarf planet** *n.* A celestial body that orbits the sun and is massive enough to assume a nearly spherical shape, but that does not clear other bodies from the neighborhood around its orbit and is not a satellite of a planet. See Usage Note at **planet**.

**dwarf star** *n.* A star, such as the sun, having relatively low mass, small size, and average or below average luminosity.

**dwarves** (dwōrvz) *n.* A plural of **dwarf**.

**dweeb** (dwēb) *n.* Slang A person regarded as socially inept or foolish, often on account of being overly studious. [Origin unknown.]

**dwell** (dwēl) *intr.v.* **dwelt** (dwēlt) or **dwelled, dwell-ing, dwells** **1.** To live as a resident; reside. **2.** To exist in a given place or state: *dwell in joy*. **3a.** To fasten one's attention on something, especially moodily or persistently: *kept dwelling on what went wrong*. See Synonyms at **brood**. **b.** To speak or write at length; expatiate: *dwelt on the need to trim the budget*. [Middle English *dwellen* < Old English *dwellan*, to mislead, delay, dwell.] —**dwell'er** *n.*

**dwell-ing** (dwēl'ing) *n.* A place to live in; an abode.

**dwelt** (dwēlt) *v.* A past tense and a past participle of **dwell**.

**DWI** *abbr.* driving while intoxicated

**dwin-dle** (dwīn'dl) *v.* **-dled, -dling, -dles** —*intr.* To become gradually less until little remains. See Synonyms at **decrease**. —*tr.* To cause to dwindle: *difficulties that dwindled my enthusiasm for the recipe*. [Frequentative of Middle English *dwinen*, to waste away < Old English *dwinan*, to shrink; see **dheu-2** in App. I.]

**DWT** *abbr.* 1. deadweight tonnage 2. deadweight tons

**dwt.** *abbr.* pennyweight

**DXA** *abbr.* dual-energy x-ray absorptiometry

**Dy** The symbol for **dysprosium**.

**dy.** *abbr.* 1. delivery 2. duty

**dy-ad** (di'ād', -əd) *n.* **1.** Two individuals or units regarded as a pair: *the mother-daughter dyad*. **2.** Biology One pair of homologous chromosomes resulting from the division of a tetrad during meiosis. **3.** Mathematics **a.** A function that draws a correspondence from any vector **u** to the vector (v-u)w and is denoted vw, where v and w are a fixed pair of vectors and v-u is the scalar product of v and u. For example, if v = (2,3,1), w = (0,-1,4), and u = (a,b,c), then the dyad vw draws a correspondence from u to (2a+3b+c)w. **b.** A tensor formed from a vector in a vector space and a linear functional on that vector space. **♦ adj.** Made up of two units. [**<** Greek *dyas*, *dyad-* < *duo*, two; see **dwo-** in App. I.]

**dy-ad-ic** (di-ād'ik) *adj.* **1.** Twofold. **2.** Of or relating to a dyad. **♦ n.** Mathematics The sum of a finite number of dyads.

**Dy-ak** (di'āk') *n.* Variant of **Dayak**.

**dy-ar-choy** (di'ār'kō) *n.* Variant of **diarchy**.

**dyb-buk** (dīb'ōök, dē-bōök') *n., pl. dyb-buks or dyb-buk-im* (dīb'ōök'im, dē'bōō-kēm') In Jewish folklore, the wandering soul of a dead person that enters the body of a living person and controls his or her behavior. [Yiddish *dibek* < Hebrew *dibbūq*, probably < *dābaq*, to cling; see **dbq** in App. II.]

**dye** (di) *n.* **1.** A substance used to color materials. Also called **dyestuff**. **2.** A color imparted by dyeing. **♦ v.** **dyed, dye-ing, dyes** —*tr.* To color (a material), especially by soaking in a coloring solution. —*intr.* To take on or impart color. —**idiom:** **of the deepest dye** Of the most extreme sort. [Middle English *deie* < Old English *dēag, dēah*.] —**dy'er** *n. **dyed-in-the-wool** (di'd-in-thə-wōōl') *adj.* **1.** Thoroughgoing; out-and-out: *a dyed-in-the-wool populist*. **2.** Dyed before being woven into cloth.*

**Dy-er** (di'er), Mary Died 1660. English-born American Quaker martyr who was twice banished from Boston because of her beliefs. She was hanged after returning to the city a second time.

**dy-er's greenweed** (di'erz) *n.* A small shrub (*Genista tinctoria*) in the pea family, native to Eurasia, having clusters of yellow flowers that

yield a dye. Also called **dyer's broom**, **woadwaxen**, **woodwaxen**.

**dyer's rocket** *n.* A European plant (*Reseda luteola*) having long spikes of small, yellowish-green flowers and yielding a yellow dye. Also called **weld**.

**dy-er's-weed** (di'erz-wēd') *n.* Any of various plants yielding coloring matter used as dye.

**dye-stuff** (di'stūf') *n.* See **dye** (sense 1).

**dye-wood** (di'wōōd') *n.* A wood used as a dyestuff.

**dye-ing** (di'ing) *v.* Present participle of **die**<sup>1</sup>. **♦ adj.** **1.** About to die: *dying patients*. **2.** Drawing to an end; declining: *in the dying hours of the legislative session*. **3.** Done or uttered just before death: *a dying request*.

**Dyir-bal** (jūr'bāl) *n., pl. Dyirbal or -bals* **1.** A member of an Aboriginal people of northeast Queensland, Australia. **2.** The Pama-Nyungan language of this people, which is now nearly extinct. [Dyirbal, ethnic self-designation.]

**dyke**<sup>1</sup> (dik) *n.* & *v.* Variant of **dike**<sup>1</sup>.

**dyke**<sup>2</sup> (dik) *n.* Offensive Slang Used as a disparaging term for a lesbian. [Origin unknown.] —**dyke'y** *adj.*

**Dy-lan** (dil'an), Bob Originally Robert Allen Zimmerman. Born 1941, American singer and songwriter who gained fame for his protest songs in the folk tradition, such as "Blowin' in the Wind" (1963), and for bringing poetic depth to rock 'n' roll with songs such as "Like a Rolling Stone" (1965).

**dyn** *abbr.* dyne

**dy-nam-ic** (di-nām'ik) *adj.* also **dy-nam-i-cal** (-i-kal) **1a.** Of or relating to energy or to objects in motion. **b.** Of or relating to the study of dynamics. **2.** Characterized by continuous change, activity, or progress: *a dynamic housing market*. **3.** Characterized by much activity and vigor, especially in bringing about change; energetic and forceful. See Synonyms at **active**. **4.** Of or relating to variation of intensity, as in musical sound. **♦ n.** **1.** An interactive system or process, especially one involving competing or conflicting forces: "the story of a malign dynamic between white prejudice and black autonomy" (Edmund S. Morgan). **2.** A force, especially political, social, or psychological: *the main dynamic behind the revolution*. [French *dynamique* < Greek *dunamikos*, powerful < *dunamis*, power < *dunasthai*, to be able; see **deu-2** in App. I.] —**dy-nam'i-cal-ly** *adv.*

**dynamical system** *n.* Mathematics A space together with a transformation of that space, such as the solar system transforming over time according to the equations of celestial mechanics.

**dynamic headroom** *n.* The capacity of an amplifier to exceed briefly its normal power output to reproduce unusually strong signal bursts without distortion.

**dynamic RAM** *n.* Computers A memory chip that stores information as electrical charges in capacitors.

**dy-na-mics** (di-nām'iks) *n.* **1a.** (used with a sing. verb) The branch of mechanics that is concerned with the effects of forces on the motion of a body or system of bodies, especially of forces that do not originate within the system itself. Also called **kinetics**. **b.** (used with a pl. verb) The forces and motions that characterize a system: *The dynamics of ocean waves are complex*. **2.** (used with a pl. verb) The social, intellectual, or moral forces that produce activity and change in a given sphere: *The dynamics of international trade have influenced our business decisions on this matter*. **3.** (used with a pl. verb) Variation in force or intensity, especially in musical sound. **4.** (used with a sing. verb) Psychodynamics.

**dy-na-mism** (di'nā-miz'm) *n.* **1.** Any of various theories or philosophical systems that explain the universe in terms of force or energy. **2.** A process or mechanism responsible for the development or motion of a system. **3.** Continuous change, activity, or progress; vigor. [French *dynamisme* < Greek *dunamis*, power; see **DYNAMIC**.] —**dy'na-mist** *n.* —**dy'na-mis'tic** *adj.*

**dy-na-mite** (di'nā-mit') *n.* **1.** Any of a class of powerful explosives composed of nitroglycerin or ammonium nitrate dispersed in an absorbent medium with a combustible dope, such as wood pulp, and an anticid, such as calcium carbonate, used in blasting and mining. **2.** Slang **a.** Something exceptionally exciting or wonderful. **b.** Something exceptionally dangerous: *These allegations are political dynamite*. **♦ tr.v.** **-mit-ed, -mit-ing, -mites** To blow up, shatter, or otherwise destroy with dynamite. **♦ adj.** Slang Outstanding; superb: *a dynamite performance*; *a dynamite outfit*. [Swedish *dynamit* < Greek *dunamis*, power; see **DYNAMIC**.] —**dy'na-mit'er** *n.*

**+ WORD HISTORY** The Nobel Prizes were established by the Swedish chemist and industrialist Alfred Nobel (1833–1896) with funds from his immense personal fortune, amassed in part through the manufacture of explosives and armaments. Nobel was the inventor of dynamite—he had discovered that the highly explosive chemical compound nitroglycerine could be made easier to transport and handle if it was mixed with an inert substance. To name his mixture, Nobel invented the word *dynamite*. Originally coined in Swedish in the form *dynamit*, the word was compounded from Greek *dunamis*, "power," and the Swedish suffix *-it*, which corresponds to the English suffix *-ite* used to form the names of rocks, minerals, commercial products, and other substances. Greek *dunamis* also gave us words such as *dynamic* and *dynamo*. *Dunamis* is related to the Greek verb *dunasthai*, "to be able," from which comes English *dynasty*, denoting a family or group that wields power over several generations.

**dy-na-mo** (di'nā-mō) *n., pl. -mos* **1.** A generator, especially one for producing direct current. **2.** An extremely energetic and forceful person: *a vice president who was the real dynamo of the corporation*. [Short for *dynamolectric machine*.]

lum. **b.** A plan or system of academic and related or ancillary activities: a *work-study program*. **c.** A plan or system of nonacademic extracurricular activities: the *football program*. **6.** A set of coded instructions that enables a machine, especially a computer, to perform a desired sequence of operations. **7.** An instruction sequence in programmed instruction. **8a.** All or part of the genetic code of a cell or organism. **b.** A characteristic sequence of developmental or behavioral events in a cell or organism, often considered to result from the expression of genes. **c.** A stimulus or training sequence that causes an organism to exhibit a behavior, as by conditioning. **tr.v.** **-grammed, -gram-ming, -grams or -gramed, -gram-ing, -grams** **1.** To include or schedule in a program: *program a new musical composition*. **2.** To design a program for; schedule the activities of. **3.** To provide (a machine) with a set of coded working instructions. **4.** To stimulate or train to perform automatically in a specified way: *consumers who have been programmed to buy brand names*. **5.** To prepare an instructional sequence for (material to be taught) in programmed instruction. **6a.** To provide (a cell or organism, for example) with a genetic program: *cells that are programmed to produce insulin*. **b.** To cause (an effect or action) by means of a genetic program; determine genetically: *"The basic housekeeping duties that a human and a yeast cell must perform are the same and are programmed by recognizably similar genes inherited from a common, single-celled ancestor"* (Nicholas Wade). **—idiom: get with the program** To follow or conform to a set of guidelines or expectations. [Late Latin *programma*, public notice < Greek *programma*, *programmat-* < *prographēin*, to write publicly: *pro-*, forth; see *PRO-* + *graphēin*, to write; see *gerbh-* in App. I.] **—pro-gram'ma-blē** *adj.*

**program director** *n.* A radio or television station director who is responsible for selecting, planning, and scheduling programs.

**pro-gram-mat-ic** (*prō'grā-māt'ik*) *adj.* **1.** Of, relating to, or having a program. **2.** Following an overall plan or schedule: a *step-by-step, programmatic approach to problem solving*. **3.** Music Of, resembling, or constituting program music. **—pro'gram-mat'ic-ally** *adv.*

**pro-gramme** (*prō'grām', -grām*) *n.* & *v.* Chiefly British Variant of **program**.

**pro-grammed** or **pro-gramed** (*prō'grāmd', -grāmd*) *adj.* **1.** Of, relating to, or resulting from programmed instruction: *programmed learning*. **2.** Relating to or resulting from a genetic program: *the programmed development of the nervous system*.

**programmed cell death** *n.* See **apoptosis**.

**programmed instruction** *n.* A method of teaching in which the information to be learned is presented in discrete units, with a correct response to each unit required before the learner may advance to the next unit.

**pro-gram-mer** or **pro-gram-er** (*prō'grām'ər*) *n.* One who programs, especially: **a.** Computers One who writes computer programs. **b.** One who prepares or writes instructional programs.

**pro-gram-ming** or **pro-gram-ing** (*prō'grām'ing, -grām'ing*) *n.* **1a.** The designing, scheduling, or planning of a program, as in broadcasting. **b.** Broadcast programs considered as a group: *the network's Thursday night programming*. **2.** The writing of a computer program.

**programming language** *n.* An artificial language used to write instructions that can be translated into machine language and then executed by a computer.

**program music** *n.* Musical compositions intended to depict or suggest nonmusical incidents, ideas, or images, such as those drawn from literature, as Tchaikovsky's *Romeo and Juliet*, or from works of art.

**program trading** *n.* Automatic trading of large blocks of stock or other securities based on algorithms that respond to market conditions. **—program trader** *n.*

**pro-gress** (*prō'grēs', -rās, prō'grēs'*) *n.* **1.** Forward or onward movement, as toward a destination: *We made little progress on our way home because of the traffic*. **2.** Development, advancement, or improvement, as toward a goal: *The math students have shown great progress*. **3.** A ceremonial journey made by a sovereign through his or her realm. **tr.v.** **pro-gress** (*prā'grēs')* **-gressed, -gress-ing, -gress-es** **1.** To move forward or onward: *The ship progressed toward the equator*. **2.** To develop, advance, or improve: *Research progressed on the new vaccine*. **3.** To increase in scope or severity, as a disease taking an unfavorable course. **—idiom: in progress** Going on; under way: *a work in progress*. [Middle English *progresse* < Latin *progrēssus* < past participle of *prōgredi*, to advance: *prō-*, forward; see *PRO-* + *gradi*, to go, walk; see *ghredh-* in App. I.]

**pro-gres-sion** (*prā'grēsh'ən*) *n.* **1.** Movement or change from one member of a continuous series to the next: *progression of the disease in stages*. **2.** A continuous series; a sequence: *a progression of limousines*. See **Synonyms** at **series**. **3.** Mathematics A series of numbers or quantities in which there is always the same relation between each quantity and the one succeeding it. **4.** Music **a.** A succession of tones or chords. **b.** A series of repetitions of a phrase, each in a new position on the scale. **—pro-gres'sion-al** *adj.*

**pro-gres-sive** (*prā'grēs'iv*) *adj.* **1.** Moving forward; advancing. **2.** Proceeding in steps; continuing steadily by increments: *progressive change*. **3.** Open to or favoring new ideas, policies, or methods: *a progressive politician; progressive business leadership*. **4.** Progressive Of or relating to a Progressive Party: *the Progressive platform of 1924*. **5.** Of or relating to progressive education: *a progressive school*. **6.** Increasing in rate as the taxable amount increases: *a progressive income tax*. **7.** Tending to become more severe or wider in scope: *progressive paralysis*. **8.** Grammar Designating a verb form that expresses an action or condition in progress. **9.** Music Of or being a style that emphasizes virtuoso technique, rhythmic and melodic complexity, and unconventional forms and instrumentation: *progressive rock; progressive jazz*. **10.** **a.** A person who is open to or favors new ideas, policies, or methods, especially in

politics. **2.** Progressive A member or supporter of a Progressive Party. **3.** Grammar A progressive verb form. **—pro-gres'sive-ly** *adv.* **—pro-gres'sive-ness** *n.*

**progressive education** *n.* A set of reformist educational philosophies and methods that emphasize individual instruction, informality in the classroom, and the use of group discussions and laboratories as instructional techniques.

**Progressive Party** *n.* **1.** A US political party that was organized by Republican insurgents in 1911 and supported the presidential candidacy of Theodore Roosevelt in 1912. Also called *Bull Moose Party*. **2.** A US political party organized in 1924 that supported the presidential candidacy of Robert M. La Follette and was active in Wisconsin until 1946. **3.** A US political party formed in 1948 to support the presidential candidacy of Henry A. Wallace.

**pro-gres-siv-ism** (*prā'grēs'iv-iz'm*) *n.* **1.** The principles and practices of political progressives. **2.** Progressive education. **—pro-gres'siv-ist** *n.* **—pro-gres'siv-ist-ic** *adj.*

**pro-gres-siv-i-ty** (*prō'grē-siv'i-tē, prō'grē-*) *n., pl. -ties* The quality or degree of being progressive: *"Proponents of progressivity often argue that higher-income people should pay higher taxes because they benefit more from government"* (National Review).

**pro-hib-it** (*prō'hīb'it*) *tr.v.* **-it-ed, -it-ing, -its** **1.** To forbid by authority: *Smoking is prohibited in most theaters*. See **Synonyms** at **forbid**. **2.** To prevent; preclude: *Modesty prohibits me from saying what happened*. [Middle English *prohibiten* < Latin *prohibere*, *prohibit-*: *pro-*, in front; see *PRO-* + *habere*, to hold; see *ghabh-* in App. I.]

**pro-hi-bi-tion** (*prō'hīb'ish'ən*) *n.* **1.** The act of prohibiting or the condition of being prohibited. **2.** A rule or law that forbids something. **3a.** The forbidding by law of the manufacture, transportation, and sale of alcoholic beverages. **b.** Prohibition The period (1920–1933) during which the 18th Amendment forbidding the manufacture, transportation, and sale of alcoholic beverages was in force in the United States.

**pro-hi-bi-tion-ist** (*prō'hīb'ish'ə-nist*) *n.* **1.** One in favor of outlawing the manufacture and sale of alcoholic beverages. **2.** often **Prohibitionist** A member or supporter of the Prohibition Party. **—pro'hīb'ish'ion-ism** *n.*

**Prohibition Party** *n.* A minor US political party organized in 1869 that advocated prohibition.

**pro-hib-i-tive** (*prō'hīb'it-iv*) also **pro-hib-i-to-ry** (*-tôr'ē*) *adj.* **1.** Prohibiting; forbidding: *took prohibitive measures*. **2.** So high or burdensome as to discourage purchase or use: *prohibitive prices*. **3.** So likely to win as to discourage competition: *the prohibitive favorite to win the nomination*. **—pro-hib'it-ive-ly** *adv.* **—pro-hib'it-ive-ness** *n.*

**pro-in-su-lin** (*prō-in'sə-lin*) *n.* A single-chain polypeptide that is the precursor of insulin, converted into insulin by enzymatic action.

**pro-ject** (*prōj'ekt', -ikt*) *n.* **1.** An undertaking requiring concerted effort: *a community cleanup project; a government-funded irrigation project*. **2.** An extensive task undertaken by a student or group of students to apply, illustrate, or supplement classroom lessons. **3.** A plan or proposal for accomplishing something. See **Synonyms** at **plan**. **4.** also **projects** A housing project. **tr.v.** **pro-ject** (*prā-jēkt'*) **-ject-ed, -ject-ing, -jects** **—tr.** **1.** To thrust outward or forward: *project one's jaw in defiance*. **2.** To throw forward; hurl: *project an arrow*. **3.** To send out into space; cast: *project a light beam*. **4.** To cause (an image) to appear on a surface by the controlled direction of light: *projected the slide onto a screen*. **5.** Mathematics To produce (a projection). **6.** To direct (one's voice) so as to be heard clearly at a distance. **7.** Psychology To externalize and attribute (an emotion or motive, for example) unconsciously to someone or something else in order to avoid anxiety. **8.** To convey an impression of to an audience or to others: *a posture that projects defeat*. **9.** To form a plan or intention for: *project a new business enterprise*. **10.** To calculate, estimate, or predict (something in the future), based on present data or trends: *projecting next year's expenses*. **—intr.** **1.** To extend forward or out; jut out: *beams that project beyond the eaves*. See **Synonyms** at **bulge. **2.** To direct one's voice so as to be heard clearly at a distance. [Middle English *projecte* < Latin *prōiectum*, projecting structure < neuter past participle of *prōicere*, to throw out: *prō-*, forth; see *PRO-* + *iacere*, to throw; see *yē-* in App. I.] **—pro-ject'a-ble** *adj.***

**pro-jec-tile** (*prā-jēkt'al, -tīl'*) *n.* **1.** A fired, thrown, or otherwise propelled object, such as a bullet, having no capacity for self-propulsion. **2.** A self-propelled missile, such as a rocket. **adj.** **1.** Capable of being impelled or hurled forward. **2.** Driving forward; impelling: *a projectile force*. **3.** Zoology Capable of being thrust outward; protrusile. [New Latin *proiectile*, neuter of *prōiectilis*, that can be thrown < Latin *prōiectus*, past participle of *prōicere*, to throw out; see **PROJECT**.]

**pro-jec-tion** (*prā-jēk'shən*) *n.* **1.** The act of projecting or the condition of being projected. **2.** A thing or part that extends outward beyond a prevailing line or surface: *spiky projections on top of a fence; a projection of land along the coast*. **3.** A plan for an anticipated course of action: *"facilities [that] are vital to the projection of U.S. force . . . in the Pacific"* (Alan D. Romberg). **4.** A prediction or estimate of something in the future, based on present data or trends. **5a.** The process of projecting an image onto a screen or other surface for viewing. **b.** An image so projected. **6.** Mathematics The image of a geometric figure reproduced on a line, plane, or surface. **7.** A system of intersecting lines, such as the grid of a map, on which part or all of the globe or another spherical surface is represented as a plane surface. **8.** Psychology **a.** The attribution of one's own attitudes, feelings, or suppositions to others: *"Even trained anthropologists have been guilty of unconscious projection—of clothing the subjects of their research in theories brought with them into the field"* (Alex Shoumatoff). **b.** The attribution of one's own attitudes, feelings, or desires to someone or something as a naive or unconscious defense against anxiety or guilt. **—pro-ject'ion-al** *adj.*



Prohibition

Director of Public Safety Smedley Butler photographed in 1924 smashing barrels of confiscated beer Philadelphia, Pennsylvania

**ri-poste** (rī-pōst') *n.* 1. *Sports* A quick thrust given after parrying an opponent's lunge in fencing. 2. A retaliatory action, maneuver, or retort. **intr.v.** -post-ed, -post-ing, -postes 1. To make a return thrust. 2. To retort quickly. [French, alteration of obsolete *risposte* < Italian *risposta*, answer < feminine past participle of *rispondere*, to answer < Latin *respondere*; see *RESPOND*.]

**ripped** (rīpt) *adj.* Slang 1. Having an extremely defined physique; toned: *ripped, bulging muscles*. 2. Intoxicated by alcohol or a drug.

**rip-per** (rīp'ər) *n.* 1. One that rips. 2. One who commits murder with a knife or similar sharp object. 3. Slang One that is an excellent example of its kind.

**rip-ping** (rīp'ing) *adj.* Informal Excellent; marvelous: *had a ripping time at the party*. [Probably < RIP<sup>1</sup>.]

**rip-ple**<sup>1</sup> (rīp'əl) *v.* -pled, -pling, -ples —*intr.* 1a. To form or display little undulations or waves on the surface, as disturbed water does. b. To flow with such undulations or waves on the surface. 2. To rise and fall gently in tone or volume. —*tr.* To cause to form small waves or undulations. **♦ n.** 1. A small wave. 2. A wavelike motion; an undulation: *the ripple of a flag*. 3. A sound like that made by rippling water: *a ripple of laughter*. [Middle English *rippelen*, to wrinkle, crease, perhaps of Scandinavian origin.] —**rip'pler** *n.* —**rip'pling-ly** *adv.*

**rip-ple**<sup>2</sup> (rīp'əl) *n.* A comblike, toothed instrument for removing seeds from flax and other fibers. **♦ tr.v.** -pled, -pling, -ples To remove seeds from with a comblike, toothed instrument. [Middle English < \**ripelen*, to remove seeds; akin to Middle Low German *repelen*.]

**ripple effect** *n.* A gradually spreading effect or influence: *"Those deviations tend to have a ripple effect throughout the economy as a whole"* (Tom Clancy).

**rip-plet** (rīp'lit) *n.* A little wave or ripple.

**ripple tank** *n.* See *wave tank*.

**rip-ply** (rīp'li) *adj.* -plier, -plier Characterized by or sounding in ripples.

**rip-rap** (rīp'rāp') *n.* 1. A loose assemblage of broken stones erected in water or on soft ground as a foundation. 2. The broken stones used for such a foundation. **♦ tr.v.** -rapped, -rap-ping, -raps 1. To construct a riprap in or on. 2. To strengthen with a riprap. [Reduplication of RAP<sup>1</sup>.]

**rip-roar-ing** (rīp'rōr'ing) also **rip-roar-i-ous** (rīp'rōr'rē-əs) *adj.* Informal Noisy, lively, and exciting. [*< RIP<sup>1</sup> + (UP)ROAR(IOUS)*.] —**rip'-roar'ing-ly** *adv.*

**rip-saw** (rīp'sō') *n.* A coarse-toothed saw used for cutting wood along the grain.

**rip-snort-er** (rīp'snōrt'ər) *n.* Slang One that is remarkable for strength, intensity, or excellence. —**rip'snort'ing** *adj.*

**rip tide** *n.* See *rip current*.

**Rip-u-ar-i-an** (rīp'yō-ār'ē-ən) *adj.* Of, relating to, or being a group of Franks who settled along the Rhine, near Cologne, in the fourth century AD. **♦ n.** A Ripuarian Frank. [*< Medieval Latin Ripuārius*.]

**rise** (riz) *v.* **rose** (rōz), **ris-en** (rīz'ən), **ris-ing**, **ris-es** —*intr.* 1. To assume a standing position after lying, sitting, or kneeling. 2. To get out of bed: *rose at dawn*. 3. To move from a lower to a higher position; ascend: *Hot air rises*. 4. To increase in size, volume, or level: *The river rises every spring*. 5. To increase in number, amount, or value: *Prices are rising*. 6. To increase in intensity, force, or speed: *The wind has risen*. 7. To increase in pitch or volume: *The sound of their voices rose and fell*. 8. To ascend above the horizon: *The moon rose an hour after sunset*. 9. To extend upward; be prominent: *The tower rose above the hill*. 10. To slant or slope upward: *Mount McKinley rises to nearly 6,200 meters*. 11. To come into existence; originate: *bitterness that rose from hard experience*. 12. To be erected: *New buildings are rising in the city*. 13. To appear at the surface of the water or the earth; emerge. 14. To puff up or become larger; swell up: *The bread dough should rise to double its original size*. 15. To become stiff and erect: *The hair rose on the cat's neck*. 16. To attain a higher status: *an officer who rose through the ranks*. 17. To become apparent to the mind or senses: *Old fears rose to haunt me*. 18. To uplift oneself to meet a demand or challenge: *She rose to the occasion and won the election*. 19. To return to life: *rose from the dead*. 20. To rebel: *"the right to rise up, and shake off the existing government"* (Abraham Lincoln). 21. To close a session of an official assembly; adjourn. —*tr.* 1. To cause to rise: *The dogs will rise the pheasants*. 2. To cause (a distant object at sea) to become visible above the horizon by advancing closer. **♦ n.** 1. The act of rising; an ascent. 2. The degree of elevation or ascent. 3. The first appearance of a celestial object as it ascends above the horizon. 4. An increase in height, as of the level of water. 5. A gently sloped hill. 6. A long broad elevation that slopes gently from the earth's surface or the ocean floor. 7. An origin, beginning, or source: *the rise of the novel*. 8. Occasion or opportunity: *facts that give rise to doubts about her motives*. 9. The emergence of a fish seeking food or bait at the water's surface. 10. An increase in price, worth, quantity, or degree. 11. An increase in intensity, volume, or pitch. 12. Elevation in status, prosperity, or importance: *the family's rise in New York society*. 13. The height of a flight of stairs or of a single riser. 14. Chiefly British An increase in salary or wages: *a raise*. 15. Informal An angry or irritated reaction: *finally got a rise out of her*. 16. The distance between the crotch and waistband in pants, shorts, or underwear. [Middle English *risen* < Old English *risan*; see *er-<sup>1</sup>* in App. I.]

**+SYNONYMS** *rise, ascend, climb, soar, mount* These verbs mean to move upward from a lower to a higher elevation, position, or amount. *Rise* has the widest range of application: *The sun rises early in the summer. Prices rise and fall. Ascend* frequently suggests a gradual but persistent rise: *The plane ascended steadily until it was out of sight. She ascended through the ranks to become CEO.* Similarly, *climb* connotes steady, often effortful progress, as against gravity: *"You climb up through the little grades and*

*then get to the top"* (John Updike). *Soar* implies effortless and usually rapid ascent to a great height or noteworthiness: *The fly ball soared out of the ballpark. The band's popularity soared after the release of the album.* *Mount* connotes a progressive increase to a higher level: *Our expenses mounted fearfully.* See also synonyms at *beginning, stem<sup>1</sup>*.

**ri-sed-ro-nate** (rī-sēd'rō-nāt') *n.* A bisphosphonate drug, C<sub>7</sub>H<sub>10</sub>NO<sub>7</sub>P<sub>2</sub>, that inhibits bone resorption and is used in the form of its sodium salt to treat and prevent osteoporosis in postmenopausal women. [Perhaps (PY)RI(DINE) + -se-, origin unknown + (HY)DR(OXY) + (BIS-PHOSPH)ONATE.]

**ris-er** (rī'zər) *n.* 1. One who rises, especially from sleep: *a late riser*. 2. The vertical part of a stair step. 3. A platform, as for elevating a group of people above a crowd, often arranged with similar platforms in tiers.

**rish-i** (rīsh'ē, rē'shē) *n., pl. -is* In Hinduism, a divinely inspired poet or sage, sometimes regarded as a saint. [Sanskrit *ṛṣiḥ*; see *ers-* in App. I.]

**ris-i-ble** (rīz'ə-bəl) *adj.* 1. Relating to laughter or used in eliciting laughter. 2. Eliciting laughter; ludicrous. 3. Capable of laughing or inclined to laugh. [Late Latin *risibilis* < Latin *risus*, past participle of *ridere*, to laugh.] —**ris'i-bil'i-ty** (-bīl'i-tē) *n.* —**ris'i-bly** *adv.*

**ris-ing** (rī'zīng) *adj.* 1. Ascending, sloping upward, or advancing: *a rising tide*. 2. Developing or emerging: *the rising generation*. 3. Increasing in power or influence: *a rising nation*. 4. About to begin a certain grade or educational level: *rising seniors*. **♦ n.** 1. The action of one that rises. 2. An uprising; an insurrection. 3. A slope or hill.

**rising action** *n.* The events of a dramatic or narrative plot preceding the climax.

**rising rhythm** *n.* A rhythmic pattern in which the stress falls on the last syllable of each foot, as in *"They danced by the light of the moon"* (Edward Lear). Also called *ascending rhythm*.

**risk** (risk) *n.* 1. The possibility of suffering harm or loss; danger. 2. A factor, thing, element, or course involving uncertain danger; a hazard: *"the usual risks of the desert: rattlesnakes, the heat, and lack of water"* (Frank Clancy). 3a. The danger or probability of loss to an insurer. b. The amount that an insurance company stands to lose. 4a. The variability of returns from an investment. b. The chance of nonpayment of a debt. 5. One considered with respect to the possibility of loss: *a poor risk*. **♦ tr.v.** **risked, risk-ing, risks 1.** To expose to a chance of loss or damage; hazard. See Synonyms at *endanger*. 2. To incur the risk of: *His action risked a sharp reprisal.* —**idiom: at risk** In an endangered state, especially from lack of proper care: *unsupervised children who are at risk of dropping out of school*. [French *risque* < Italian *risco, rischio*, probably < Medieval Greek *rizikon*, sustenance obtained by a soldier through his own initiative, fortune < Arabic *rizq*, sustenance, that which God allots < Syriac *ruziqā*, daily bread < Middle Iranian *rōzīg* < *rōč*, day < Old Iranian \**rauhah-*; see *leuk-* in App. I.] —**risk'er** *n.*

**risk arbitrage** *n.* The simultaneous purchase and sale of assets that are potentially but not necessarily equivalent in order to exploit a discrepancy in price. —**risk arbitrageur** *n.*

**risk capital** *n.* See *venture capital*.

**risk factor** *n.* A characteristic, condition, or behavior, such as high blood pressure or smoking, that increases the possibility of disease or injury.

**risky** (rīskē) *adj.* -i-er, -i-est Accompanied by or involving risk or danger; hazardous. —**risk'i-ly** *adv.* —**risk'i-ness** *n.*

**Ri-sor-gi-men-to** (rī-sōr'jə-mēn'tō, rē-zōr'jē-) *n.* The period of or the movement for the liberation and political unification of Italy, beginning about 1750 and lasting until 1870. [Italian < *risorgere*, to rise again < Latin *resurgere*; see *RESURGE*.]

**ri-sot-to** (rī-sō'tō, rē-zōt'tō) *n., pl. -tos* A dish consisting of rice cooked in stock with other ingredients, such as mushrooms and Parmesan cheese. [Italian < *riso*, rice < Old Italian; see *RICE*.]

**RISP** *abbr.* Baseball runners in scoring position

**ris-per-i-done** (rī-spēr'ə-dōn') *n.* An oral antipsychotic drug, C<sub>22</sub>H<sub>27</sub>FN<sub>3</sub>O<sub>2</sub>, that is a dopamine and serotonin antagonist and is used to treat schizophrenia and bipolar disorder. [Perhaps (fluor)is(oxazole), one of its constituents (FLUORO- + BENZ- + IS(O)- + OX- + AZOLE) + (PI)PERID(INE) + -ONE.]

**ris-qué** (rīskā') *adj.* Suggestive of or bordering on indelicacy or impropriety. [French < past participle of *risquer*, to risk < *risque*, risk; see *RISK*.]

**ris-sole** (rī-sōl', rī-sōl', rē-sōl') *n.* A small, pastry-enclosed croquette of finely minced meat or fish, usually fried in deep fat. [French < Old French < Vulgar Latin \**russeola*, reddish paste < Late Latin, feminine of *russeolus*, reddish < Latin *ruscus*, red; see *reudh-* in App. I.]

**ris-so-lé** (rē-sō-lā') *adj.* Browned by frying. [French < past participle of *rissoler*, to brown < *rissolle*, rissolle; see *RISSOLE*.]

**Ris-so's dolphin** (rīs'ōz) *n.* A marine mammal (*Grampus griseus*) having a bulbous head, a tall curved dorsal fin, and a gray body with white streaks or scars. Also called *grampus*. [After Antoine Risso (1777–1845), French naturalist born in Nice.]

**ri-strā** (rē'strā) *n.* A string on which foodstuffs, such as chilies, onions, or garlic, are threaded or tied for storage. [Spanish < Old Spanish *riestra*, variant of *riesta, rieste* < Latin *restis*, rope, cord, ristra.]

**+WORD HISTORY** A *ristra* not only can be used to decorate bare kitchen walls, it is a good way of preserving foodstuffs that keep best in the open air. Dried chilies are likely to get musty if stored in a dark or damp place where there is no movement of air, and garlic and onions may begin to sprout. The Spanish word *ristra* descends from the Latin word *restis*, meaning not only "rope" but also "ristra." Ristras of garlic and onions have probably adorned Mediterranean kitchens since ancient times.



ristra

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