

Dental Implants Market to 2018

Technical Advances and Procedure Efficiency Accelerate the Shift Away from Traditional Devices



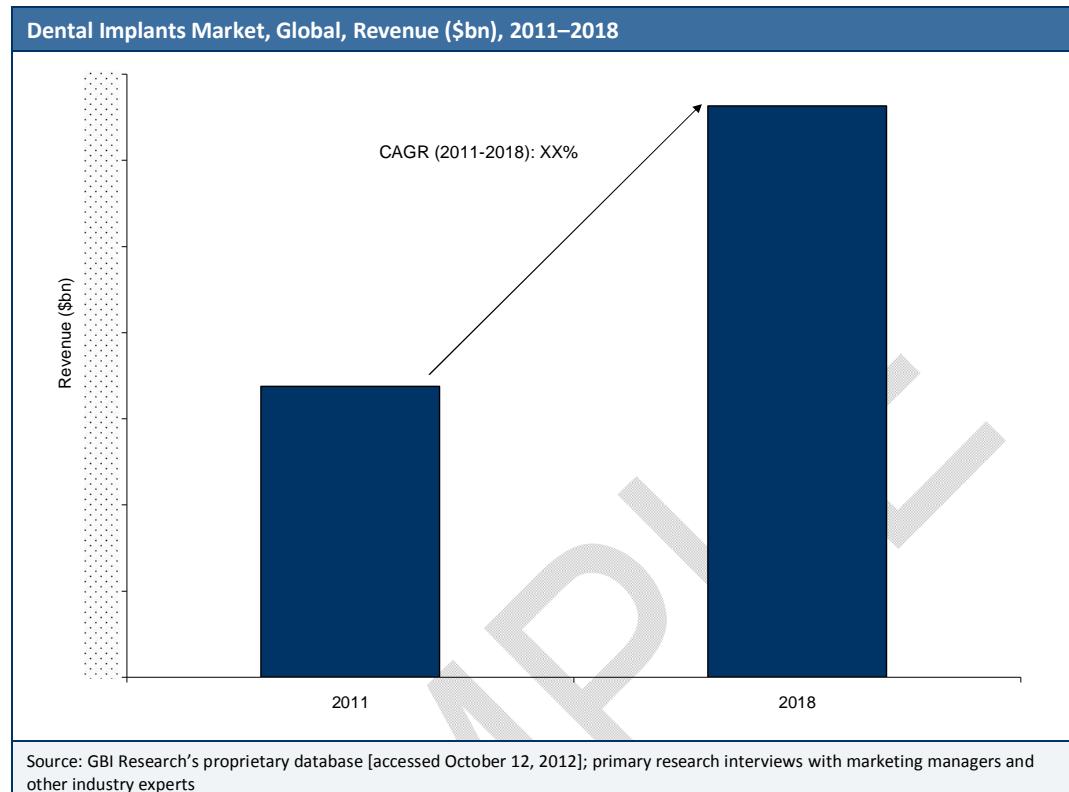
GBI Research Report Guidance

- This report comprises an executive summary capturing the key points that determine the dynamics of the dental implants market. Competition in the industry and key segments and geographical regions are also outlined.
- Chapter three provides information on the market size for the 2004–2011 historic period and the 2011–2018 forecast period. It also gives information about market trends; market dynamics, comprising comprehensive information on drivers and restraints; and the competitive landscape.
- Chapter four discusses titanium dental implants and zirconium dental implants segments. Market size information for the 2004–2011 historic period and the 2011–2018 forecast period is discussed for each segment, but company shares have not been covered.
- Chapter five gives information on market size for the 2004–2011 historic period and the 2011–2018 forecast period for the US, Canada, the UK, France, Germany, Italy, Spain, Japan, China, India, Australia and Brazil. A cross-country analysis of these countries is also discussed.
- Chapter six gives profiles of the leading dental implants companies, along with their products, features and benefits.
- Chapter seven focuses on the pipeline products in the dental implants market. Key pipeline products are listed and discussed in detail and product approval and expected launch dates are provided for some.
- Chapter eight discusses the consolidation landscape in the dental implants industry and looks at the deals that took place between 2007 and 2011.

The global dental implants market is expected to grow at a Compound Annual Growth Rate (CAGR) of XX% from \$XX billion in 2011 to \$XX billion in 2018

Executive Summary

Global Dental Implants Market Forecast to Grow at a CAGR of XX% from 2011 to Exceed \$XX Billion in 2018



The global dental implants market is expected to grow at a Compound Annual Growth Rate (CAGR) of XX% from \$XX billion in 2011 to \$XX billion in 2018. The major factors driving the market are the increasing preference for dental implants as a treatment option for tooth replacement over traditional solutions, and the availability of advanced solutions for dental implants based on digital dentistry, thereby increasing procedure efficiency. In an effort to increase physician adoption, a number of manufacturers are focusing on training and education programs, which are expected to drive the adoption of dental implants in a big way. Emerging countries such as India and China show potential for market growth due to increasing awareness and large patient populations, although price and surgeon efficiency could restrain the market.

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2 Introduction

Dental implants are artificial tooth roots that can be inserted into the jaw, replacing the missing tooth. They fuse with the underlying bone in a process called osseointegration and function as the natural tooth, thereby preserving the jaw structure by preventing bone resorption or atrophy.

Dental implants can be made of materials such as titanium or zirconium and are inserted into jawbone to supporting tooth prostheses. Implant procedures can be carried out on single tooth or multiple teeth, depending on the bone quantity available. The availability of Small-Diameter Implants (SDIs) has further simplified the challenge of multiple implants, as they can be carried out even on limited bone volume and in narrow spaces.

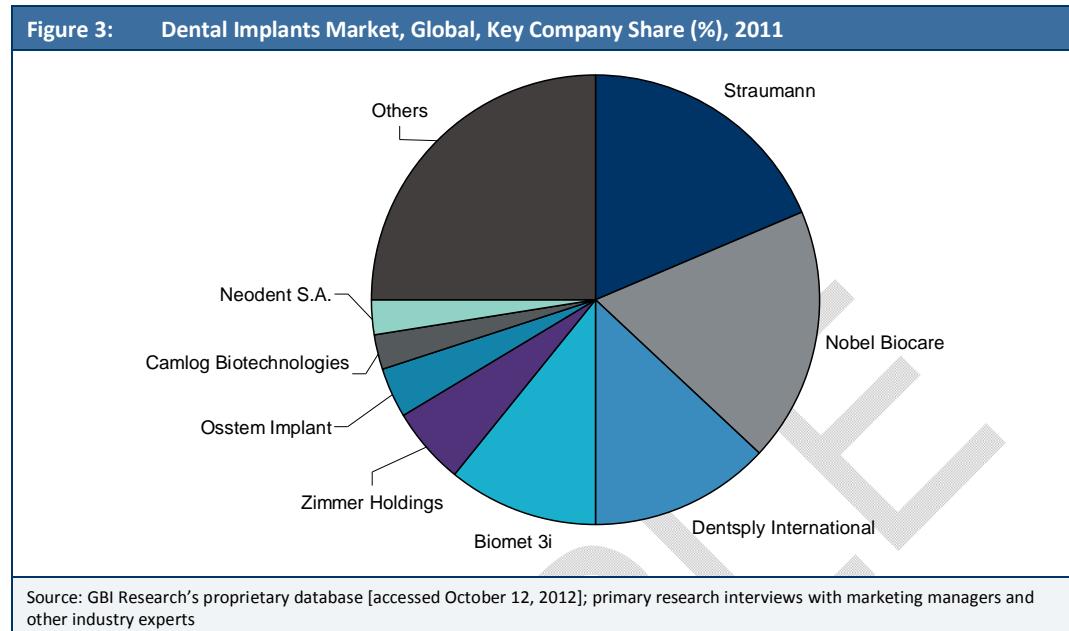
The growing concern over oral hygiene and an increasing life expectancy has resulted in higher procedure volumes. An increasingly elderly population is also fuelling the demand for dental implants. Growth in surgical procedural volumes, increased patient awareness and technological advances will in turn boost the growth of the dental implants market.

A number of companies are capitalizing on the growth opportunities offered by the dental implants market, both in developed nations such as the US and in emerging markets, by launching products with advanced features. Also encouraging is the fact that nine products in the pipeline are in the approval phase, ready to be launched on the market soon.

SAMPLE

4.3 Global Dental Implants Market, Key Company Share (%), 2011

The following figure shows the market shares of key companies in the global dental implants market in 2011.



The following table shows the revenue of key companies in the global dental implants market in 2011.

Table 3: Global Dental Implants Market, Key Company Share (%), 2011

Company Name	Revenue (\$m)
Straumann	
Nobel Biocare	
Dentsply International	
Biomet 3i	
Zimmer	
Osstem Implant	
Camlog Biotechnologies	
Neodent	
Others	

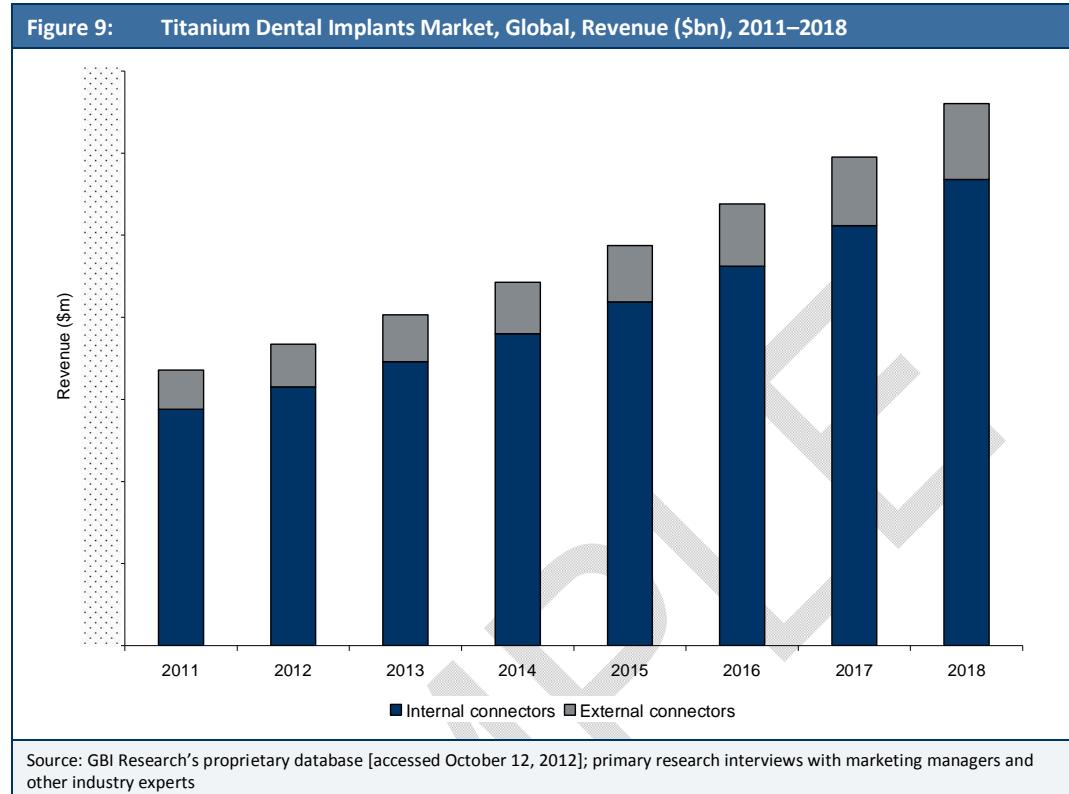
Source: GBI Research's proprietary database [accessed October 12, 2012]; primary research interviews with marketing managers and other industry experts

Straumann is the market leader in the global dental implants market with a share of XX%. It has a strong product platform and products in the high-end 'premium' segment as well as value-based products in the 'value' and 'discount' segments. Straumann's strong market presence can also be attributed to its geographical expansion in key markets, including Brazil, Russia, China and India. Neodent's acquisition has been instrumental in increasing its market share in Brazil and has also enhanced its reach to other Latin American markets.

The titanium dental implants market is expected to grow at an estimated CAGR of XX% from \$XX billion in 2011 to \$XX billion in 2018

5.2 Global Titanium Dental Implants Market, Revenue (\$bn), 2011–2018

The following figure shows the global revenue for the titanium dental implants market expected over the 2011–2018 forecast period.



The following table shows the global revenue for the titanium dental implants market expected over the 2011–2018 forecast period.

Table 6: Global Titanium Dental Implants Market, Global, Revenue (\$bn), 2011–2018

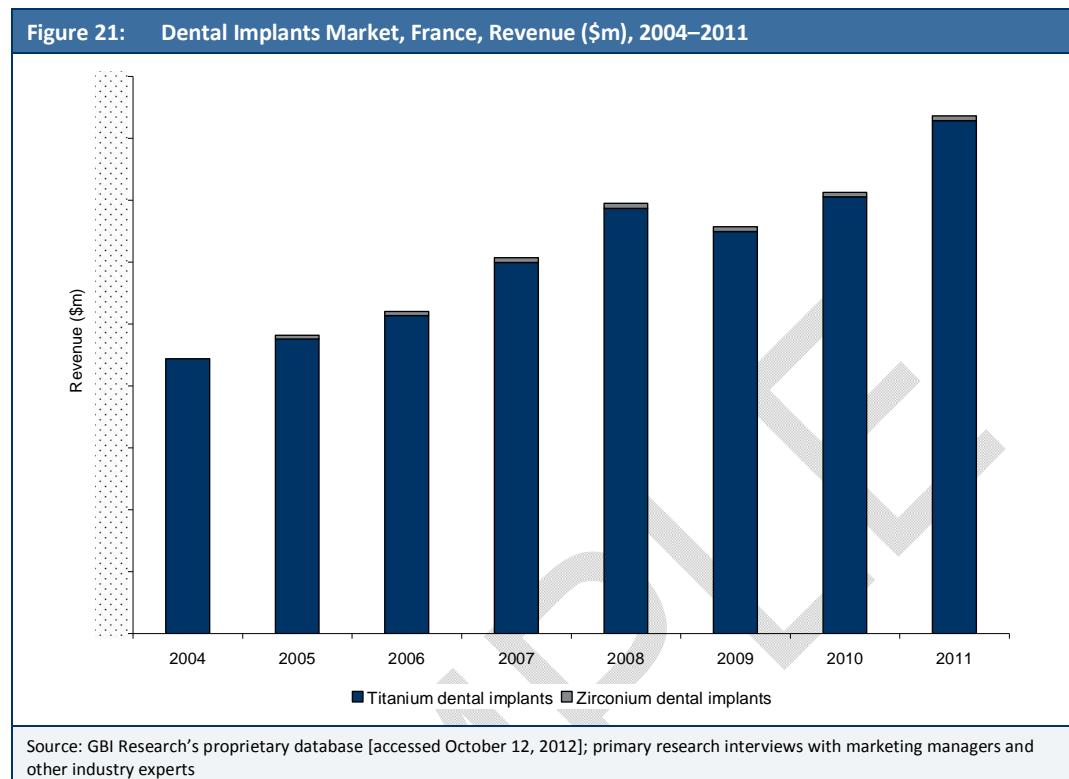
	2011	2012	2013	2014	2015	2016	2017	2018	CAGR 2011–2018
External connectors									
Internal connectors									
Total									

Source: GBI Research's proprietary database [accessed October 12, 2012]; primary research interviews with marketing managers and other industry experts

The titanium dental implants market is expected to grow at an estimated CAGR of XX% from \$XX billion in 2011 to \$XX billion in 2018 due to a comprehensive body of clinical evidence elucidating the success of the use of titanium dental implants.

6.2.9 Dental Implants Market, France, Revenue (\$m), 2004–2011

The following figure shows the revenue generated by the French spinal surgery devices market from 2004 to 2011.



The following table shows the revenue generated by the French dental implants market from 2004 to 2011.

Table 18: Dental Implants Market, France, Revenue (\$m), 2004–2011

	2004	2005	2006	2007	2008	2009	2010	2011	CAGR 2004–2011
Titanium dental implants									
Zirconium dental implants									
Total									

Source: GBI Research's proprietary database [accessed October 12, 2012]; primary research interviews with marketing managers and other industry experts

The dental implants market in France grew at a CAGR of XX% from \$88.8m in 2004 to \$XXm in 2011. A decline in the dental implants market was observed from 2008 to 2009 due to the economic downturn, but this improved in 2010 due to low procedure costs.

10 Appendix

10.1 Definitions

A dental implant is an artificial tooth root replacement and is used in prosthetic dentistry to support a prosthesis that resembles a tooth or group of teeth.

10.1.1 Dental Implants

10.1.1.1 Titanium Dental Implants

A typical implant consists of a titanium screw, resembling a tooth root with a roughened or smooth surface. It has better tensile strength and fracture resistance than traditional implants.

External Connectors

An external connector is a dental implant which includes a hexagonal reference post against which the prosthesis can be keyed. Abutments are not covered in this segment. One unit refers to one external connector.

Internal Connectors

An internal connector dental implant includes a lobed configuration for installing the implant and a beveled surface positioned on the proximal side of the lobed configuration to ensure stability between the implant and corresponding abutment. Abutments are not covered in this segment. One unit refers to one internal connector.

10.1.1.2 Zirconium Dental Implants

Zirconium or zirconia dental implants are designed to be more cosmetically aesthetic than titanium dental implants. One unit consists of one zirconia implant.

10.2 Acronyms

- 3-D:** Three-Dimensional
- AAID:** American Academy of Implant Dentistry
- CAD:** Computer-Aided Design
- CAGR:** Compound Annual Growth Rate
- CAM:** Computer-Aided Manufacturing
- CBCT:** Cone Beam Computed Tomography
- CT:** Computed Tomography
- DVT:** Digital Volume Tomography
- EAO:** European Academy of Osseointegration
- FDA:** Food and Drug Administration
- GDP:** General Dental Practitioner
- ICOI:** International Congress of Oral Implantologists
- SDI:** Small-Diameter Implant

10.3 Sources

- AAID (2011), Dental Implants Facts and Figures, Available from: http://www.aid-implant.org/about/Press_Room/Dental_Implants_FAQ.html [Accessed on October 12, 2012].
- Astra Tech (2009), Tooth loss: a common problem, Available from: <http://www.astratech.com.pl/Library/934395.pdf> [Accessed on October 12, 2012].
- Barter S, et al. (2010). Computer-aided implant placement in the reconstruction of a severely resorbed maxilla: A 5-year clinical study. *International Journal of Periodontics and Restorative Dentistry*; 30(6): 627–637
- Buser, et al. (2004). Optimizing esthetics for implant restorations in the anterior maxilla: anatomic and surgical considerations. *International Journal of Oral Maxillofacial Implantology*; 19(suppl): 43–61.
- Christensen GJ and Child PL (2010). “The Truth About Small-Diameter Implants”, *Dentistry Today*, May 1, 2010. Available from: <http://www.dentistrytoday.com/articles/articles/178-dental-products/2646-the-truth-about-small-diameter-implants>. [Accessed on September 13, 2012].
- Dental Tribune (2010), Nobel holds Global Symposium in New York, Available from: Nobel holds Global Symposium in New York [Accessed on October 12, 2012].
- Manski RJ and Brown E (2007). Dental Use, Expenses, Private Dental Coverage, and Charges, 1996 and 2004. Agency for Healthcare Research and Quality, MEPS Chartbook No. 17. Available from: http://www.meps.ahrq.gov/mepsweb/data_files/publications/cb17/cb17.pdf
- Nobel Biocare (2006). Nobel Biocare Annual Report. Available from: http://corporate.nobelbiocare.com/Images/en/annual_report_2006_tcm269-30495.pdf.
- Nobel Biocare (2010), EAO 2010, Available from: http://www.nobelbiocare.com/en/news-events/events/2010/ea0_28.aspx
- OsseoNews (2007). Cost of Dental Implants. Available from: <http://www.osseonews.com/patient-information/what-are-the-costs-of-dental-implants/>. [Accessed on October 12, 2012].
- Schneider D, et al. (2009). A systematic review on the accuracy and the clinical outcome of computer-guided template-based implant dentistry. *Clinical Oral Implants Research*; 20(suppl 4): 73–86.
- Shatkin TE, et al. (2007). Mini dental implants for long-term fixed and removable prosthetics: a retrospective analysis of 2,514 implants placed over a five-year period. *Compendium of Continuing Education in Dentistry*; 28(2): 92–99.
- Straumann (2012a). Straumann investor presentation. Available from: http://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/publications-and-reports/capital-markets-day-2012/Unlocking%20full%20potential_Straumann%20CMD%202012_SpalingerII.pdf.
- Straumann (2012b). Unlocking the full potential of emerging markets, Available from: http://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/publications-and-reports/capital-markets-day-2012/Unlocking%20full%20potential_Straumann%20CMD%202012_SpalingerII.pdf
- Straumann (2012c). Unlocking the full potential of emerging markets, Available from: http://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/publications-and-reports/capital-markets-day-2012/Unlocking%20full%20potential_Straumann%20CMD%202012_SpalingerII.pdf
- Tsui L (2012). Long-Term Health Insurance Guarantees. Joint IACA, IAAHS and PBSS Colloquium in Hong Kong. Available from: http://www.actuaries.org/HongKong2012/Presentations/TBR10_Tsui.pdf.
- University of Saskatchewan (2011), HUMAN RESOURCES BENEFITS BULLETIN, Available from: http://www.usask.ca/hrd/benefits/employee_groups/faculty_in_scope/permanent/benefits_bulletin_dental_implants_usfa.pdf [Accessed on October 12, 2012]

10.4 Research Methodology

GBI Research's dedicated research and analysis teams consist of experienced professionals in marketing and market research with consulting backgrounds in the medical devices industry and advanced statistical expertise.

GBI Research adheres to the codes of practice of the Market Research Society (www.mrs.org.uk) and the Strategic and Competitive Intelligence Professionals (www.scip.org).

All GBI Research databases are continuously updated and revised. The following research methodology is followed for all databases and reports.

10.4.1 Secondary Research

The research process begins with exhaustive secondary research on internal and external sources being carried out to source qualitative and quantitative information relating to each market.

The secondary research sources that are typically referred to include, but are not limited to:

- Company websites, annual reports, financial reports, broker reports, investor presentations and SEC filings.
- Industry trade journals, scientific journals and other technical literature.
- Internal and external proprietary databases.
- Relevant patent and regulatory databases.
- National government documents, statistical databases and market reports.
- Procedure registries.
- News articles, press releases and web-casts specific to the companies operating in the market.

10.4.2 Primary Research

GBI Research conducts hundreds of primary interviews a year with industry participants and commentators in order to validate its data and analysis. A typical research interview fulfills the following functions:

- It provides first-hand information on the market size, market trends, growth trends, competitive landscape and future outlook.
- It helps in validating and strengthening the secondary research findings.
- It further develops the analysis team's expertise and market understanding.

Primary research involves email correspondence, telephone interviews and face-to-face interviews for each market, category, segment and sub-segment across geographies.

The participants who typically take part in such a process include, but are not limited to:

- Industry participants: CEOs, VPs, marketing/product managers, market intelligence managers and national sales managers.
- Hospital stores, laboratories, pharmacies, distributors and paramedics.
- Outside experts: investment bankers, valuation experts, research analysts specializing in specific medical equipment markets.
- Key opinion leaders: physicians and surgeons specializing in different therapeutic areas corresponding to different kinds of medical equipment.

10.4.3 Models

Where no hard data is available GBI Research uses modeling and estimates in order to produce comprehensive data sets. The following rigorous methodology is adopted:

Available hard data is cross referenced with the following data types to produce estimates:

- Demographic data: population, split by segment.
- Macro-economic indicators: Gross Domestic Product, Inflation rate. .
- Healthcare Indicators: health expenditure, physicians base, healthcare infrastructure and facilities.
- Selected epidemiological and procedure statistics.

Data is then cross-checked by the expert panel.

All data and assumptions relating to modeling are stored and are available to clients on request.

10.4.4 Forecasts

GBI Research uses proprietary forecast models. The following four factors are utilized in the forecast models:

- Historic growth rates.
- Macro indicators such as population trends and healthcare spending.
- Forecast epidemiological data.
- Qualitative trend information and assumptions.

Data is then cross-checked by the expert panel.

10.4.5 Expert Panels

GBI Research uses a panel of experts to cross verify its databases and forecasts.

GBI Research's expert panel comprises marketing managers, product specialists, international sales managers from medical device companies; academics from research universities, KOLs from hospitals, consultants from venture capital funds and distributors/suppliers of medical equipment and supplies.

Historic data and forecasts are relayed to GBI Research's expert panel for feedback and adjusted in accordance with this feedback.

10.6 Disclaimer

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